

766  
No. 2159.

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United States  
Circuit Court of Appeals

FOR THE NINTH CIRCUIT.

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Los Angeles Gas & Electric Corporation, a corporation,

*Plaintiff in Error,*

*vs.*

The Western Gas Construction Company, a corporation,

*Defendant in Error.*

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UPON WRIT OF ERROR TO THE UNITED STATES DISTRICT COURT OF THE SOUTHERN DISTRICT OF CALIFORNIA, SOUTHERN DIVISION.

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**BRIEF ON BEHALF OF PLAINTIFF IN ERROR.**

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Los Angeles Gas & Electric Corporation, a corporation, <i>Plaintiff in Error,</i> <i>vs.</i> The Western Gas Construction Company, a corporation, <i>Defendant in Error.</i>	}
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**Brief on Behalf of the Los Angeles Gas & Electric Corporation, Plaintiff in Error.**

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**STATEMENT OF THE CASE.**

In the month of April, 1907, the Western Gas Construction Company proposed to manufacture and install for the Los Angeles Gas and Electric Company at its plant in Los Angeles, California, an apparatus called an Extended Carburetter Superheater Water Gas apparatus to be used for the production of gas from lamp-black. The proposal was in writing [Tr. p. 9] and it contained certain guaranties as to the capacity and economies of operation of the apparatus proposed to be

furnished. In reliance upon those guaranties the gas and electric company entered into a written contract with the construction company for the purchase of the apparatus [Tr. pp. 11 *et seq.*] at the price of \$35,694, payable fifty per cent. when the material was shipped, twenty-five per cent. during the progress of the work, and the balance thirty-five days after acceptance of the apparatus. The construction company manufactured the parts of the apparatus at its plant in Fort Wayne, Indiana, shipped them to Los Angeles, and delivered and assembled them at the plant of the gas and electric company there. At the time of shipment of the parts and during the construction of the apparatus the gas company paid to the construction company, under the provisions of the contract concerning the manner of payment of the contract price, the sum of \$26,823.45. After the completion of the apparatus a controversy arose between the construction company and the gas company as to whether the apparatus fulfilled the guaranties of efficiency and economy made in the construction company's proposal; and the gas company refused to accept the apparatus or to pay the balance of the purchase price, but offered to permit the construction company to remove the apparatus upon the repayment of the purchase money already paid, and also demanded such repayment. Upon the refusal of the construction company to repay any of the money paid to it, the gas company brought an action in July, 1908, against the construction company, in the United States Circuit Court to recover the money so paid and for damages for breach of contract. A year later, and after the de-



defendant had appeared in that action, negotiations between the parties were undertaken with a view to settle the controversy without further litigation, and on the 12th of July, 1909, with the express intent of settling and disposing of all controversy and litigation, the gas company and the construction company entered into a new contract at Los Angeles. [Tr. pp. 39 *et seq.*] In this contract, after reciting the making of the former contract of April, 1907, the installation of the apparatus, the payment of a part of the purchase price, the arising of litigation on the question whether the apparatus was in accordance with the contract and could produce the amount of gas guaranteed, and the desire of the parties to dispose of the controversy, the construction company agreed to make such changes in the apparatus as it might desire, for the purposes of a "preliminary experiment" for the determination of the character of the changes and alterations desirable preparatory to a "final test." Some of the changes contemplated were set forth in the contract and it was agreed in the contract that, after these changes were made, the construction company should at once proceed to make gas with the apparatus of the kind specified in the contract of April, 1907, with the economy of fuel and oil mentioned in that contract, and it was further agreed in this new contract that if, in this final test, the construction company should bring the apparatus to a gas-making capacity of 2,000,000 cubic feet per day, with the specified economy of fuel and oil, then the construction company should accept \$26,000 in full payment for the apparatus, and return the \$823.45 over

and above that sum which had already been advanced to it under the former contract; that if the apparatus, during the test, was brought to a capacity of 2,750,000 cubic feet per day, then the construction company should be paid \$35,674, the original contract price, and that proportionate amounts between these two limits should be paid according to the gas-making capacity of the apparatus between 2,000,000 and 2,750,000 cubic feet per day as shown in the final test; while if the apparatus could not, during the final test, be brought to a capacity of at least 2,000,000 cubic feet per day, then the construction company was to remove the apparatus and to refund the \$26,823.45 advanced to it. The "final test" referred to is stated to be a test of twenty consecutive days, to commence when the construction company notified the gas company; and the capacity of the apparatus is declared to "the average capacity per twenty-four hours of said set during said test." [Tr. p. 43.]

After the execution of this new contract the action brought by the gas company upon the former contract was dismissed, and in August, 1909, the Los Angeles Gas & Electric Corporation, the plaintiff in error, became the successor and assignee of the Los Angeles Gas and Electric Company. For the sake of brevity the plaintiff in error will hereafter be referred to as the gas corporation, and the defendant in error, as heretofore, will be called the construction company. In July and August, 1909, the construction company operated the apparatus in a preliminary test and thereafter made such changes in the apparatus as it desired to make, and, as the findings show, a final test was commenced on

the 10th of March, 1910, [Tr. p. 777] and the apparatus was operated continuously for twenty days, that is, until the 30th of March (with the exception of three days, the 14th, 15th and 16th of March, during which the apparatus was shut down for repairs). During the operation of the apparatus from the 10th to 30th of March it failed to produce an average 2,000,000 cubic feet per 24 hours—the minimum capacity required by the contract—and the trial court so finds [Tr. p. 778]. Nor were the guaranties of economy of fuel consumption, or of quality of gas fulfilled. Under these circumstances the gas company refused to accept the apparatus and demanded its removal and the return of the money advanced. Upon the refusal of the construction company to comply with either of these demands, the present action was brought for the recovery of the money paid and for \$1500.00 additional for the cost of removing the apparatus from the gas company's premises.

The defendant in its answer and cross-complaint, besides specifically denying practically all of the allegations of the complaint, set up the defense that the substance furnished to it by the gas corporation during the final test "was not lamp-black, but was only partly "lamp-black, and partly composed of other substances;" and that the substance furnished "as and for lamp-black "was not furnished in a scientific shape, nor in the usual "way, *nor according to the understanding between the "defendant and the Los Angeles Gas and Electric Com- "pany and the plaintiff."* [Tr. p. 86.] The underscored portion of this quotation from the defendant's pleading sets forth the principal contention upon which the de-

fendant relied at the trial. It was upon the issue raised by this allegation that the trial court found against the plaintiff in error, and, as will be seen from the specifications of error relied upon, all the other material or determinative findings made by the court, which are adverse to the plaintiff in error, are dependent upon, and must stand or fall with the finding that the plaintiff did not during said final test, “furnish lamp-black fuel of the *quality* called for by said contract.” [Finding XVI, Tr. p. 781.]

The particulars in which the trial court found that the material furnished by the gas corporation, from which gas was required to be manufactured by the apparatus installed by the construction company, was not of the quality called for by the contract, are set out in Finding XVI, in which the court finds that “the said “lamp-black fuel so furnished was the lamp-black \* \* \* material referred to in the contracts of the “parties, and was in brick form \* \* \* and was in “compliance with the contract except as hereinafter set “forth” [Tr. p. 782]—namely, that the bricks of lamp-black were not of the hardness and tensile strength called for by the contract. The plaintiff in error contended that the contract did not call for, or prescribe, any particular form of lamp-black or degree or quality of solidity, hardness or tensile strength of bricks or lumps. The written contract in suit, which was made July 12, 1909, does not, as will be seen upon inspection [Tr. p. 39], contain any provision or agreement that the lamp-black from which the gas is to be made should be in any particular form, or have any particular quality

of hardness or solidity, but the trial court held that negotiations between the parties, *prior to the making of the contract of April, 1907*, showed an agreement or understanding, binding upon the gas company, that the lamp-black to be furnished under the new written contract of July 12, 1909, should be in bricks of a quality equal in hardness, substance and tensile strength to certain sample briquettes of lamp-black obtained from the gas company by the construction company prior to entering into the contract of April, 1907.

This modification of, and addition to the terms of a written contract by the findings of the court is the principal error relied upon by the plaintiff in error. The trial court also found that the apparatus installed by the construction company did not have "a capacity in excess of 2,000,000 cubic feet of gas per twenty-four hours of the kind of gas prescribed in the contract of July 12, 1909, and with the fuel economies therein specified." [Tr. p. 785.] The contract provided that if the apparatus was shown to have a capacity of not more than 2,000,000 cubic feet per day with the specified economy of fuel and oil, then the construction company should accept \$26,000 in full payment for the apparatus and return the \$823.45 over and above that sum which had already been advanced to it. [Tr. p. 41.] The trial court found from the evidence that the gas-making capacity of the apparatus did not exceed 2,000,000 cubic feet of gas per twenty-four hours, and yet failed to find that the gas company was entitled to the return of the sum of \$823.45. As a conclusion of law from these two findings, and from the other findings which are logically

based upon them, the court below concluded that the plaintiff was entitled to take nothing against the defendant. The court also concluded that the defendant was entitled to take nothing against the plaintiff, notwithstanding that the failure of the apparatus installed by the construction company to produce the quantity of gas guaranteed was, according to the findings, "due to the fault of plaintiff" [Tr. p. 779] in not furnishing lamp-black of the quality described in the findings of the court.

From this decision and judgment the plaintiff in error sued out a writ of error, returnable before this Honorable Court.

#### **STATEMENT OF THE ERRORS RELIED UPON.**

The plaintiff in error asserts and relies upon the following errors assigned in the assignment of errors filed in the court below [Tr. p. 801]:

##### **I.**

Said Circuit Court of the United States, Ninth Circuit, Southern District of California, Southern Division, erred in giving, making, rendering, and entering judgment in the above-entitled case in favor of the defendant and against the plaintiff.

##### **II.**

The said court erred in failing to give, make, render, and enter judgment in the above-entitled cause in favor of the plaintiff and against the defendant in the sum of \$28,323.45.

III.

The said court erred in making and filing the following portion of finding No. II, as follows:

“And said defendant was also informed by said Los Angeles Gas and Electric Company, through defendant’s said agent, during such negotiations, that the fuel to be used in said proposed apparatus would be of like quality,” to-wit, solid and substantially compressed (as the sample of briquette fuel furnished to the defendant’s agent by the said Los Angeles Gas and Electric Company, prior to April 8th, 1907).

It appears from the evidence that the defendant was not, prior to the 8th day of April, 1907, or at any other time, informed by the Los Angeles Gas and Electric Company, through any of its agents or otherwise, that the fuel to be used in the said proposed water-gas apparatus of the Western Gas Construction Company would have a solidity or tensile strength equal to or greater than that possessed by the sample of briquette furnished to the defendant by the Los Angeles Gas and Electric Company prior to April 8th, 1907. On the contrary, the evidence shows that prior to the 8th day of April, 1907, the defendant was furnished by the Los Angeles Gas and Electric Company with a lamp-black briquet about two inches in diameter, and that the only representation made to the defendant prior to the entering into of the contract of April 8th, 1907, was that the lamp-black fuel which would be furnished to the defendant for the operation of the water-gas set under said contract would be lamp-black fuel having a chemical composition and quality equal to the chemical com-

position and quality of the lamp-black briquette furnished to the defendant, and that at the time of supplying the defendant with said lamp-black briquette, the said Los Angeles Gas and Electric Company specifically informed the defendant that the lamp-black fuel would not be furnished to the defendant in the size or form of the briquette, and neither stated to the defendant nor gave it any reason to expect or believe that the lamp-black fuel to be furnished to the defendant under said contract of April 8th, 1907, would possess a tensile strength or stability equal to or greater than that of said lamp-black briquette, furnished to it.

The evidence is insufficient to support the said finding in the respects mentioned.

#### IV.

The said court erred in making and filing the following portion of finding No. II, as follows:

That the Los Angeles Gas and Electric Company "would furnish said material in the form of bricks of about the size of ordinary building bricks, to-wit, about eight inches in length, about four inches in width and three inches in thickness, or in the form of briquets."

It appears from the evidence that on the 5th day of March, 1907, the Los Angeles Gas and Electric Company wrote a letter to the defendant, as follows:

"We are now negotiating for the purchase of a dryer to handle all of our brick, and anticipate that this dryer will turn out our carbon with from five per cent to not exceed ten per cent of moisture. After passing the dryer, the same will be bricked for use in the generators."



Other than the aforesaid statement, there was no agreement upon the part of the Los Angeles Gas and Electric Company that the said lamp-black fuel would be furnished to the defendant in the form of bricks.

The evidence is insufficient to support said finding in the respects mentioned.

## V.

The said court erred in making and filing the following portion of finding No. II, as follows:

That the said Los Angeles Gas and Electric Company, prior to April 8th, 1907, informed the defendant that the lamp-black fuel which would be furnished to the defendant for the operation of its water-gas machine would be "of the same quality as the said samples so submitted."

It appears from the evidence that at no time did the Los Angeles Gas and Electric Company inform the defendant, or state to it, that the lamp-black fuel which would be furnished to it for the operation of its water-gas apparatus would have the tensile strength or stability or solidity equal to or greater than that of the lamp-black briquette sample supplied to the defendant by the said Los Angeles Gas and Electric Company. On the contrary, it appears from the evidence that the only representation or statement made by the Los Angeles Gas and Electric Company prior to April 8th, 1907, or at any other time, in comparing the fuel which would be furnished to defendant with the lamp-black sample which was furnished to it, was the statements by the Los Angeles Gas and Electric Company to the effect

that the chemical constituency of the lamp-black fuel to be furnished would be the same as that of the lamp-black briquette furnished; but no statement or representation was made as to the tensile strength or stability of the proposed fuel to be furnished to the defendant.

The evidence is insufficient to support the said finding in the respects mentioned.

## VI.

The said court erred in making and filing the following portion of finding No. II, as follows:

“That similar information was also given the said defendant by the said Los Angeles Gas and Electric Company” (referring to information as to the quality of the lamp-black fuel which would be furnished as to stability) “in the form of correspondence which passed between them pending said negotiations.”

It appears from the evidence that in none of the written correspondence passing between the Los Angeles Gas and Electric Company and the defendant was any mention made of what would be the character of the lamp-black fuel which would be furnished and supplied to the defendant during the operation and testing of its said apparatus as to tensile strength, or stability or solidity; but all of the written correspondence referring to said lamp-black was confined solely to the discussion of the chemical constituency of said lamp-black and to its moisture content.

The evidence is insufficient to support the said finding in the respects mentioned.

VII.

The court erred in making and filing the following portion of finding No. II, as follows:

“That all knowledge of the defendant with respect to the conditions at the plant of said Los Angeles Gas and Electric Company and of the character and quality of said fuel was obtained as above set forth.”

It appears from the evidence that B. S. Pederson, agent of the said defendant, had for several years, prior to April, 1907, resided on the Pacific Coast, and was familiar with the by-product of oil-gas manufacture, known as lamp-black; and from the written correspondence introduced in evidence which passed between the parties to the contract, it is shown that the defendant company, through its agent, Mr. Pederson, obtained information as to the gas-making qualities and character of lamp-black, as a by-product of oil-gas manufacture, from sources other than the information received from the agents of the Los Angeles Gas and Electric Company, and from the briquette samples supplied by the said Los Angeles Gas and Electric Company to the defendant. And the evidence shows that before the defendant was willing to enter into the contract of April 8th, 1907, it received from and acted upon information from Mr. Pederson as to his own opinion and knowledge of the character and value of lamp-black as a fuel for water-gas manufacture.

The evidence is insufficient to support said finding in the respect mentioned.

VIII.

The court erred in making and filing the following portion of finding No. II, as follows:

“Defendant relied thereon” (information received from the Los Angeles Gas and Electric Company, and the samples of lamp-black briquettes furnished by said company to defendant) “and entered into the said contract in reliance upon the information thus obtained, and as above set forth.”

It appears from the evidence that the defendant entered into the contract of April 8th, 1907, relying only partially upon the information obtained by its agents from the Los Angeles Gas and Electric Company. The evidence further shows that before the defendant company would consent to enter into the contract of April 8th, 1907, it desired to obtain, and did obtain, from its agent, B. S. Pederson, a vast amount of information which he had gained through his experience as their representative of the Pacific Coast from sources other than that of the Los Angeles Gas and Electric Company.

The evidence is insufficient to support the said finding in the respects mentioned.

IX.

The court erred in making and filing the following portion of finding No. IV as follows:

That subsequent to April 8th, 1907, and prior to July 12th, 1909, “said defendant claimed that the said apparatus was completed in accordance with said contract.”

It appears from the evidence that at no time between the 8th day of April, 1907, and July 12th, 1909, did the defendant claim or assert in writing or orally to the Los Angeles Gas and Electric Company, or to any other person, that the said apparatus was completed in accordance with said contract. To the contrary, the evidence shows that at no time prior to the said 12th day of July, 1909, did the said apparatus ever produce as much as 2,000,000 cubic feet of gas per 24 hours, and that the balance of the purchase price payable within 35 days after the completion of the said apparatus, was never requested of the Los Angeles Gas and Electric Company by the defendant.

The evidence is insufficient to support the said finding in the respect mentioned.

#### X.

The court erred in making and filing the following portion of finding No. IV as follows:

“It has at all times been claimed by the defendant herein that said company” (Los Angeles Gas and Electric Company) “did not fully or at all perform said contract in some of the substantial particulars thereof.”

It appears from the evidence that at no time prior to the 12th day of July, 1909, did the defendant complain, or even claim or assert that the said Los Angeles Gas and Electric Company had, in any respect or at any time, failed to perform all the conditions and obligations upon its part to be performed under said contract of April 8th, 1907. On the contrary, the evidence shows that the said apparatus of the defendant had, at all

times prior to the said 12th day of July, 1909, failed without any fault on the part of the Los Angeles Gas and Electric Company, to attain any of the fuel economies or the capacity to produce even 2,000,000 cubic feet of gas per day of 24 hours, as provided for in said contract of April 8th, 1907; and that the said defendant did not, at any time, attribute the said failure of the said apparatus to any act or fault upon the part of the Los Angeles Gas and Electric Company, to perform its obligations under said contract of April 8th, 1907.

The evidence is insufficient to support the said finding in the respects mentioned.

## XI.

The court erred in making and filing finding No. V, as follows:

“With respect to the issues raised by the allegations of the eighth paragraph of the complaint to the effect that after the installation and completion of the extended carburetter superheater water-gas apparatus, provided for in the said contract of April 8th, 1907, tests of the said apparatus were thereafter made and to the effect that said apparatus never operated fully or completely or successfully or in any way approached or fulfilled the guaranties contained in the said contract, in the particulars set forth in the said eighth paragraph of said complaint and the denials of the said allegations in the answer of the defendant herein, the court finds that a controversy arose between the said Los Angeles Gas and Electric Company and the defendant as to whether or not tests of the same were made, and

whether or not the said apparatus did comply with the said guaranties; and at the trial of this cause it was agreed on behalf of both parties to this suit that the issues raised by the said allegations were not material to this controversy, and no evidence was offered thereon.”

It appears from the evidence that the plaintiff repeatedly throughout the trial of this case attempted and endeavored to show and prove that at all times prior to the 12th day of July, 1909, the defendant failed to bring its said water-gas apparatus to the operative efficiencies set forth in said contract of April 8th, 1907, and that the trial court refused at all times to receive said evidence in evidence upon the objection interposed by the defendant, and not by reason of any agreement upon the part of the plaintiff that said evidence was not material to this controversy.

The evidence is insufficient to support the finding in the respects mentioned.

## XII.

The court erred in making and filing the following portion of finding No. XI, as follows:

The said apparatus of the defendant was “not in operation on the 14th, 15th and 16th days of March, 1910, except for an inconsiderable period on the 14th and 16th of March, 1910.”

It appears from the evidence that the apparatus of the defendant was in operation continuously from the 10th to the 30th of March, 1910, inclusive. The evidence further shows that such time as was taken by the de-

fendant on the 14th, 15th and 16th of March, 1910, for the purpose of cleaning out the checker-work of said apparatus is, according to gas-making practice, deemed part of the operation of a water-gas apparatus, although during such time the machine was not actually producing gas.

The evidence is insufficient to support the finding in the respects mentioned.

### XIII.

The court erred in making and filing the following portion of finding No. XI, as follows:

“It is not true that the defendant notified plaintiff that the test was ended at that time” March 30th, 1910, at 6 o'clock a. m.).

It appears from the evidence that the defendant did notify the plaintiff that it had concluded its test of the said water-gas apparatus on the 30th day of March, 1910, at 6 o'clock a. m. The evidence shows that prior to the commencement of said final test on the 10th day of March, 1910, that the defendant notified the plaintiff in writing on the 28th day of February, 1910, as shown by plaintiff's exhibit 16, that on the morning of March 10th, 1910, the defendant would “begin the final 20-day test of the water-gas apparatus now at your plant, as provided for in the contract between your company and the Western Gas Construction Company, dated July 12th, 1909”; that at 6 o'clock a. m. on said 10th day of March, 1910, the defendant did commence the final test and operation of said apparatus and continued the same for the next twenty days consecutively, and did, of its



own accord, on the 30th day of March, 1910, at 6 o'clock a. m., cease operation of said water-gas apparatus; that at said time the plaintiff did have on hand at said apparatus the necessary fuel, labor and other material to have enabled defendant to have continued the operation of said apparatus had it so desired; that on said 30th day of March, 1910, within a few hours after said 6 o'clock a. m. of said day, the representative of the defendant presented himself at the office of the said Los Angeles Gas and Electric Corporation, and stated that the said defendant had completed said final test of said apparatus.

The evidence is insufficient to support the finding in the respect mentioned.

#### XIV.

The court erred in making and filing the following portion of finding No. XI as follows:

“Defendant did, then and there” (March 30th, 1910), “offer to proceed with the test of the said apparatus for any reasonable number of days for the purpose of demonstrating the actual capacity of said apparatus.”

It appears from the evidence that the defendant did not, on said March 30th, 1910, offer to proceed with the test of said apparatus for any reasonable number of days, for the purpose of demonstrating the actual capacity of said apparatus. On the contrary, the evidence shows that after ceasing the operation of said apparatus on the 30th day of March, 1910, the representative of the defendant stated to the plaintiff that the apparatus was in such a condition that the generator head had to be

reinforced by new I-beams, as the same was leaking, that the carburetor and superheater had to be entirely re-checked and lined with bricks, and various other changes made before the operation of said apparatus could continue. And the evidence shows that the only representation made by the defendant of its willingness to continue the operation of said apparatus was an expression of their willingness to so continue if the plaintiff would allow the defendant time to make all of the said changes and repairs upon said apparatus, and that then the defendant would be glad to make another demonstration of the said apparatus; but no offer was made by the defendant to immediately continue the operation of said apparatus.

The evidence is insufficient to support the finding in the respects mentioned.

#### XV.

The court erred in making and filing the following portion of finding XI, as follows:

Defendant "offered to correct any defects in said apparatus which had resulted during the operation of the same."

It appears from the evidence that on the 30th day of March, 1910, the defendant offered to correct any defects which had resulted in said apparatus during its operation solely upon the condition and agreement upon the part of the plaintiff, that it would then and there accept the said apparatus, or that it would permit the defendant to commence to make another and additional test of said apparatus.

The evidence is insufficient to support the finding in the respects mentioned.

XVI.

The court erred in making and filing the following portion of finding No. XI, as follows:

The defendant at said time offered "to make another test thereof."

It appears from the evidence that the defendant did not, at said time, to-wit, March 30th, 1910, offer to make another test of said apparatus, but, on the contrary, the evidence shows that the defendant's offer to operate said apparatus was made contingent upon the defendant being given the opportunity and time to make certain and extensive repairs to defects which had resulted in the final test of said apparatus, and that at said time the defendant was neither able to, willing or desirous to continue the operation or make another test of said apparatus until some future time, at which time said extensive repairs on said apparatus would have been made.

The evidence is insufficient to support the finding in the respects mentioned.

XVII.

The court erred in making and filing the following portion of finding No. XII, as follows:

"It is not true that said apparatus is or was of no value to plaintiff by reason of its failure to have produced on an average of not less than 2,000,000 cubic feet of gas for each day of the said period; nor because

of its failure during said period to consume 35 pounds or less of lamp-black fuel per thousand cubic feet of gas made or for any other cause.”

It appears from the evidence that the said apparatus of the defendant is and was of no value to the plaintiff by reason of its failure to produce on an average of not less than 2,000,000 cubic feet of gas per day of 24 hours, and because of its failure to produce gas with a consumption of not more than 35 pounds of lamp-black per thousand cubic feet of gas made, and by reason of its failure to produce gas having a candle-power of not less than 20 candles.

The evidence shows that the cost of labor to operate the defendant's water-gas apparatus is constant, regardless of the amount of gas produced by said apparatus, and that the smaller the generating capacity of said apparatus the more it would cost the plaintiff for labor to generate each thousand cubic feet of gas produced by it.

The evidence further shows that lamp-black fuel, such as was furnished to the defendant by the plaintiff, has a ready sale in the market of the city of Los Angeles at \$9 to \$10 per ton, and that the failure of such apparatus to produce gas with a consumption of not exceeding 35 pounds of lamp-black per thousand cubic feet of gas made, would have resulted in said apparatus consuming, based upon its rate of consumption of lamp-black fuel during said test from March 10th to March 30th, 1910, about \$10,000 worth of lamp-black more per year than the said apparatus would have consumed had it developed a capacity to produce gas, using not

more than 35 pounds of lamp-black fuel for each one thousand cubic feet of gas produced.

And the evidence further shows that the failure of said apparatus to produce gas having a candle-power not less than 20 candles would necessitate the plaintiff increasing the candle-power of the oil-gas produced by its other sets, which could only be done at a considerable cost to the plaintiff, for this must be done through a process of mixing the two gases and thereby raising the candle-power of the gas produced in the defendant's apparatus to a marketable candle-power.

The evidence is insufficient to support the finding in the respects mentioned.

### XVIII.

The court erred in making and filing the following portion of finding No. XII, as follows:

"The court finds that it is not true that the failure on the part of said apparatus during said period to produce the average quantity of gas above referred to, with the fuel consumption per thousand cubic feet above specified was without any fault on the part of the plaintiff."

It appears from the evidence that the failure on the part of said apparatus of the defendant, during said period from March 10th to March 30th, 1910, to produce the average quantity of gas referred to in the contract of July 12th, 1909, with a fuel consumption per thousand cubic feet of gas made, specified therein, was without any fault on the part of the plaintiff.

It appears from the evidence, and was admitted by the defendant, that in all respects except as to an al-

leged failure on the part of the plaintiff to supply the defendant during the operation of said apparatus from March 10th to March 30th, 1910, with lamp-black fuel of greater stability and tensile strength than that possessed by the lamp-black fuel actually furnished to the defendant, the plaintiff at all times and in every respect fully performed each and every condition and obligation on its part to be performed under the said contract of July 12th, 1909.

The evidence shows, as is hereinafter in this assignment of errors more particularly and fully alluded to, that the lamp-black fuel furnished by the plaintiff during said final test of said apparatus, was at all times lamp-black fuel such as was specified and provided for in the said contract of July 12th, 1909; that the tensile strength and stability of the lamp-black fuel furnished to the defendant during said final test of said apparatus was superior to and greater than that of any lamp-black fuel ever furnished or supplied to the defendant for the operation of its said apparatus since the 8th day of April, 1907; that said lamp-black fuel, so supplied to the defendant during said test, was lamp-black fuel of the exact quality and character that the defendant and the Los Angeles Gas and Electric Company had in mind and contemplated using at the time said contract of July 12th, 1909, was entered into.

The evidence is insufficient to support the finding in the respects mentioned.

#### XIX.

The court erred in making and filing the following portion of finding No. XII, as follows:

“That there never was a test of said apparatus under the conditions prescribed by the said contract.”

It appears from the evidence that the test and operation of the said apparatus of the defendant, from March 10th to March 30th, 1910, inclusive, was a final test of said apparatus under the conditions prescribed by the contract of July 12th, 1909; that on the 9th day of March, 1910, the defendant notified the plaintiff, in writing, that at 6 o'clock a. m. on March 10th, 1910, it would commence the final twenty-day test of said apparatus, as provided for in said contract, and that in pursuance of said notification, the defendant did, on March 10th, 1910, commence the final test of said apparatus and did prosecute the same thereafter for twenty consecutive days until March 30th, 1910, at 6 o'clock a. m., at which time the defendant did, of its own accord, cease to operate the said apparatus, and that during said test the plaintiff at all times furnished and supplied to the defendant fuel and other operative conditions in full compliance with the obligations on its part to be performed under and by virtue of the contract of July 12th, 1909, and in all other respects complied with the said contract.

The evidence is insufficient to support the finding in the respects mentioned.

## XX.

The court erred in making and filing the following portion of finding No. XII, as follows:

“The failure to test said apparatus, as provided in said contract, was due to the fault of the plaintiff.”

The evidence shows that there was no failure to test said apparatus, as provided in said contract of July 12th, 1909, through or due to any fault of the plaintiff. On the contrary, the evidence shows that from March 10th to March 30th, 1910, a final test was had of said apparatus, such as was provided for under the contract of July 12th, 1909, and that during said final test of said apparatus the plaintiff furnished and supplied to the defendant, at all times during said test, fuel and operative conditions such as were required of it under the said contract of July 12th, 1909, and in all other respects performed all the conditions and obligations upon its part to be performed under said contract.

The evidence further shows that prior to the commencement of the operation of said apparatus, on the 10th day of March, 1910, the defendant notified the plaintiff, in writing, that it would commence the final test of the said apparatus on March 10th, 1910; that at said time the defendant did commence the final test of said apparatus and concluded the same on the 30th day of March, 1910. The evidence shows that prior to the commencement of said final test on March 10th, 1910, the defendant informed the plaintiff that all of the conditions furnished by the plaintiff for said test were perfectly satisfactory to the defendant, and notified the plaintiff that all of the fuel which plaintiff had on hand for the purpose of supplying the defendant during said test was satisfactory to the defendant, and such fuel as was called for under the contract of July 12th, 1909.

The evidence is insufficient to support said finding in the respects mentioned.



XXI.

The court erred in making and filing the following portion of finding No. XIII, as follows:

“It is not true that said apparatus was in a dilapidated condition” (at the time it ceased operating on March 30th, 1910).

It appears from the evidence that on the 30th day of March, 1910, the said apparatus of the defendant was in a dilapidated condition; that the charging floor of said apparatus was loose, and was in places raised and bulged out due to the expansion of the top of the generator; that the top of the generator was in a leaky condition, due to insufficient reinforced support, which would necessitate removing the entire top of the generator and installing large I-beams as supports thereof; that one of the most important valves connecting the generator with the carburetor was installed in a temporary and unsatisfactory manner; that a large quantity of the brick work in the superheater had melted and fallen down, and that all of the remaining brick work in the superheater and carburetor was so covered and clogged with carbon that before the apparatus could be further operated it would be necessary to remove all of the bricks in said superheater and carburetor, to reline the same and correct all of the defects as above set forth; that such changes would necessitate the expenditure of a large sum of money, and would consume considerable time.

The evidence is insufficient to support the finding in the respects mentioned.

XXII.

The court erred in making and filing the following portion of finding No. XIII, as follows:

“All of said defects could easily have been corrected” (referring to defects existing in said apparatus on March 30th, 1910).

It appears from the evidence that the defects existing in said apparatus on March 30th, 1910, could only be remedied by the expenditure of a large amount of money and several weeks of labor.

The evidence is insufficient to support the finding in the respect mentioned.

XXIII.

The court erred in making and filing that portion of finding XIII, as follows:

That the said defects were “conditions not infrequently resulting from the operation of such apparatus in the natural and ordinary course of operation.”

It appears from the evidence that in January and February of 1910 the defendant expended about \$8,000 in putting its said apparatus in perfect working order, and that at said time all of the brick work in said apparatus was in a perfect and clean condition; that from the 14th to the 16th of March, 1910, the defendant ceased making gas in its said apparatus, and did expend said time in cleaning out the brick work in its said apparatus; and that on the 30th day of March, 1910, the brick work in said apparatus was so choked and burned that the apparatus could not be further operated without taking out all of the brick work in said apparatus

and relining the same and reinforcing the top of the generator and making many other repairs; that in all the gas-generating sets operated by the plaintiff at its plant it was only customary to shut down said plants once a year for the purpose of rechecking or relining the same with new brick, and it is not a natural or usual thing, but on the contrary, it is a most unusual requirement for an apparatus to require relining and rechecking with bricks within a period of three or four months.

Furthermore there was no evidence of any apparatus ever operated by the plaintiff or the defendant requiring the reinforcement of the top of the generator, as a result of its operation, nor any evidence that temporary or imperfect valves is a condition resulting in the natural and ordinary operation of such water-gas apparatus.

The evidence is insufficient to support the finding in the respects mentioned.

#### XXIV.

The court erred in making and filing the following portion of finding No. XIII as follows:

“The defendant did offer to correct all of said imperfections” (existing in said apparatus on March 30th, 1910).

It appears from the evidence that the offer of the defendant to correct the imperfections existing in its said apparatus on March 30th, 1910, was made contingent upon the acceptance of said apparatus by the plaintiff or the agreement upon the part of the plaintiff to grant it another and additional test of said apparatus.

The evidence is insufficient to support the said finding in the respect mentioned.

XXV.

The court erred in making and filing the following portion of finding No. XIII, as follows:

The defendant did offer "to restore the said apparatus so that the same would be in first class order if the said plaintiff would permit the said work to be done and would accept said apparatus or permit a test of the same under the terms and provisions of the contract, or would permit an operation or test of the same under the conditions provided in the contract for any reasonable period that might be desired by plaintiff."

It appears from the evidence that the only offer made by the defendant to repair the dilapidated and imperfect condition of said apparatus after the 30th of March, 1910, was an offer to repair the same either upon the agreement upon the part of the plaintiff to accept said apparatus and pay therefor the purchase price, or an agreement upon the part of the plaintiff to grant another and additional test of said apparatus.

The evidence is insufficient to support the finding in the respect mentioned.

XXVI.

The court erred in making and filing the following portion of finding No. XIII, as follows:

"Plaintiff did not fully or completely perform each and all of the conditions upon its part under said contracts to be performed."

It appears from the evidence that the plaintiff did, at all times, fully and completely perform all of the conditions upon its part to be performed under said contract. The evidence shows that, except with respect to the claim of the defendant urged during the trial, that the lamp-black fuel furnished by the plaintiff during the final test of said apparatus did not possess the tensile strength and stability required of it under the contract of July 12th, 1909, the defendant admitted that the plaintiff had at all times fully and completely performed all the conditions on its part to be performed under said contract of July 12th, 1909. And the evidence further shows that all of the lamp-black fuel which was furnished by the plaintiff during the final test of said apparatus was lamp-black fuel of the kind and character called for and provided in said contract of July 12th, 1909.

The evidence is insufficient to support the finding in the respects mentioned.

## XXVII.

The court erred in making and filing the following portion of finding No. XIII as follows:

That the plaintiff "failed to perform its obligations under said contracts in the particulars herein set forth."

The findings show that the particular to which the above portion of the finding refers was the alleged failure on the part of the plaintiff to furnish defendant with lamp-black fuel possessing tensile strength and stability such as the defendant claims was required under the contract of July 12th, 1909. But it appears

from the evidence that the lamp-black fuel furnished and supplied by the plaintiff to the defendant was, at all times, lamp-black fuel of the kind and character contracted for under said contract of July 12th, 1909; and that, as to the lamp-black fuel furnished to the defendant by the plaintiff during the final test of said apparatus from March 10th to March 30th, 1909, the defendant had examined the said fuel prior to the commencement of said test, and informed plaintiff, in writing, that the same was satisfactory to the defendant.

The evidence is insufficient to support the finding in the respects mentioned.

#### XXVIII.

The court erred in making and filing the following portion of finding No. XIV, as follows:

“The allegations of the 22nd paragraph of the complaint are not true.”

The allegations of the 22nd paragraph of the complaint are as follows:

“That, by reason of the failure and refusal of defendant to return to plaintiff said sum of twenty-six thousand eight hundred twenty-three and 45/100 dollars (\$26,823.45), and to remove said apparatus from plaintiff's premises, as aforesaid, plaintiff has been damaged in the sum of twenty-eight thousand three hundred twenty-three and 45/100 dollars (\$28,323.45).”

It appears from the evidence that the plaintiff is and was damaged to the extent of \$28,323.45 by reason of the failure and refusal of the defendant to return to

the plaintiff the sum of \$26,323.45, and to remove the said apparatus of the defendant from the plaintiff's premises.

The evidence shows that under and by virtue of the contract of July 12th, 1909, the defendant agreed to return to plaintiff said sum of \$26,323.45, if, during the final twenty-day test of said apparatus, as under said contract provided, it failed to bring its said apparatus to an average gas-making capacity, during said final test, of at least two million cubic feet per day, using not more than 35 pounds of lamp-black fuel containing not more than ten per cent of moisture per thousand cubic feet of gas made, and to produce a good commercial gas of not less than 20 candlepower.

It appears from the evidence that from the 10th to the 30th of March, 1910, the defendant had made such twenty-day final test of said apparatus as in said contract provided, and that during said test of said apparatus, without any fault on the part of the plaintiff, the said apparatus failed to produce an average of at least two million cubic feet of gas per day of 24 hours; that during said test said apparatus consumed more than 39 pounds of carbon, containing less than ten per cent of moisture, for each one thousand cubic feet of gas made; and that said apparatus did not, during said test, produce gas of an average candle-power of twenty candles.

The evidence further shows that the plaintiff, immediately after the 30th day of March, 1910, demanded of the defendant that it immediately return to the plaintiff the sum of \$26,323.45; and requested that the de-

fendant remove from the plaintiff's premises its said apparatus; that the defendant has at all times refused to remove its said apparatus, and that the reasonable cost of removing the same is \$2,000; that by reason of the failure of the defendant to pay the plaintiff the said sum of \$26,323.45, and to remove its said apparatus from the premises of the plaintiff, the plaintiff has been damaged in the sum of \$28,323.45.

The evidence is insufficient to support the finding in the respects mentioned.

### XXIX.

The court erred in making and filing the following portion of finding No. XVI, as follows:

“The defendant did perform the obligations undertaken by it in said contract.”

It appears from the evidence that the defendant did not perform the obligations undertaken by it under its contract of April 8th, 1907, or under its contract of July 12th, 1909. On the contrary, it appears from the evidence that prior to July 12th, 1909, the defendant had, at all times, failed to bring its said apparatus to a gas-making capacity of at least 2,000,000 cubic feet of gas per day of 24 hours; or to bring its apparatus to a capacity of producing one thousand cubic feet of gas, using not more than 35 pounds of lamp-black fuel, containing not more than 10 per cent of moisture; or to produce with its said apparatus a gas having a candle-power of not less than twenty candles; and that said failure on the part of the defendant was without any fault on the part of the Los Angeles Gas and Electric Company.



It further appears from the evidence that from the 10th day of March to the 30th of March, 1910, inclusive, the defendant did make a final test of its said water-gas apparatus, as contemplated and provided for under the contract of July 12th, 1909, and that during said test the defendant, without any fault on the part of the plaintiff, failed to bring its said apparatus to an established gas-making capacity, as in said contract provided, of at least 2,000,000 cubic feet of gas per day of 24 hours; and failed to produce one thousand cubic feet of gas, using not more than 35 pounds of lamp-black fuel, containing not more than ten per cent of moisture; and to produce a good commercial gas of not less than twenty candle-power.

The evidence shows that during said final test of said apparatus the said apparatus did not produce more than 1,800,000 cubic feet of gas per 24 hours, and did not produce gas with a consumption of less than 39 pounds of lamp-black fuel per thousand cubic feet of gas, or produce a good commercial gas of a candle-power greater than 19 candles; that at the termination of said test the said apparatus of the defendant was in a dilapidated and defective condition, and not in such a condition as would have enabled it to be further operated without an expenditure of considerable money and time for the purpose of repairing its many defects.

The evidence is insufficient to support the finding in the respects mentioned.

### XXX.

The court erred in making and filing the following portion of finding No. XVI, as follows:

“Plaintiff did not perform the obligations undertaken by it in said contracts in this: that it did not, during said test, furnish lamp-black fuel of the quality called for by said contract.”

It appears from the evidence that the lamp-black fuel furnished and supplied by the plaintiff to the defendant during the final test of said apparatus from March 10th to March 30th, 1910, and at all other times, was lamp-black fuel of the quality, kind and character called for in said contract of July 12th, 1909; that the plaintiff did not fail to perform the obligations undertaken by it under said contract of July 12th, 1909, by reason of the quality of lamp-black fuel furnished and supplied by it to the defendant during the said final twenty-day test of said apparatus. The evidence shows that neither the Los Angeles Gas and Electric Company or the plaintiff, in their contracts of April 8th, 1907, and July 12th, 1909, or at any other time, agreed to furnish and supply to the defendant lamp-black fuel of a chemical or physical quality or character different from that possessed by the lamp-black fuel furnished to the defendant during the said final twenty-day test of said apparatus; that between April 9th, 1908, and July 12th, 1909, the Los Angeles Gas and Electric Company had furnished to and the defendant company had used in its water-gas apparatus thousands of tons of bricked lamp-black fuel of the same chemical composition and physical characteristics as possessed by the lamp-black fuel furnished by the plaintiff and the defendant during the said final twenty-day test of said apparatus in March, 1910, and that at no time prior to July 12th, 1909, or at no time

thereafter had the defendant been supplied with lamp-black fuel having a greater tensile strength or stability, or of superior chemical or physical composition than that possessed by the lamp-black fuel furnished to the defendant during the said final twenty-day test of said apparatus.

The evidence further shows that at the time of entering into said contract of July 12th, 1909, the Los Angeles Gas and Electric Company was, with the knowledge of the defendant, the only concern in the United States producing lamp-black fuel in the form of brick, and that at said time and at all times thereafter the Los Angeles Gas and Electric Company and the plaintiff used in the manufacture of said bricks the best machinery procurable for such purpose, and did manufacture bricks with as great a tensile strength and stability as was possible to manufacture the same; that the defendant was at said time familiar with the character of the lamp-black bricks which the Los Angeles Gas and Electric Company had in the past furnished to it and which it was possible for the said company and plaintiff to furnish to it in the future; that at the time of entering into said contract of July 12th, 1909, the Los Angeles Gas and Electric Company did not inform the defendant, or represent to it, or did the defendant request of the Los Angeles Gas and Electric Company that the fuel which would be furnished to it under said contract of July 12th, 1909, should be of a chemical constituency or possess a greater tensile strength or solidity than that possessed by the lamp-black bricks theretofore furnished to the defendant, or different form, or greater

than that actually possessed by the lamp-black fuel which was supplied to the defendant during the final test of said apparatus from the 10th to the 30th of March, 1910.

The evidence further shows that in December, 1909, the plaintiff had accumulated a supply of about 3,000 tons of bricked lamp-black fuel, which it proposed to furnish to the defendant during the final test of the said apparatus, and so informed defendant; that the defendant did thereupon examine said fuel, and notified plaintiff orally and in writing that the same was satisfactory to the defendant for its use during the proposed final twenty-day test of said apparatus; that plaintiff did thereafter use every effort and protection to keep said fuel in the best possible condition and the defendant was, at all times prior to the 10th day of March, 1910, aware of the methods taken by the plaintiff in caring for and protecting the said fuel, and that the defendant, at no time prior to the 20th day of March, 1910, at which time it was in the midst of said twenty-day test, informed the plaintiff or claimed that the lamp-black fuel furnished by the plaintiff did not have the tensile strength and stability required of the lamp-black fuel under the contract of July 12th, 1909.

The evidence shows that all of the lamp-black fuel furnished and supplied by the plaintiff to the defendant during the said twenty-day final test of said apparatus was lamp-black fuel of the character provided in said contract of July 12th, 1909, and was lamp-black fuel of the best chemical composition and possessing the greatest tensile strength and solidity that it was possible for

the plaintiff, or any other person in the world at said time, to produce commercially; that it was at said time impossible for the plaintiff or any other person to have supplied the defendant with superior lamp-black brick fuel.

The evidence further shows that all of the lamp-black fuel furnished and supplied to the defendant by the plaintiff during said final twenty-day test of said apparatus was equal to and better than any lamp-black fuel ever theretofore furnished or supplied to the defendant by the Los Angeles Gas and Electric Company or the plaintiff.

The evidence is insufficient to support the finding in the respects mentioned.

### XXXI.

The court erred in making and filing the following portion of finding No. XVI, as follows:

“The lamp-black fuel furnished defendant during said test contained from 10 to 15 per cent of impurities in the form of tar or other hydrocarbons and a small percentage of noncombustible ash.”

It appears from the evidence that the tar, hydrocarbons and noncombustible ash occurring in the lamp-black fuel furnished by the plaintiff to the defendant did not constitute impurities in said lamp-black fuel; but, on the contrary, the evidence shows that lamp-black produced in the manufacture of gas by petroleum oil necessarily possesses a certain percentage of tar, hydrocarbons and noncombustible ash, and that in the trade and art of gas manufacture such elements are considered as ever-

present constituents of lamp-black as known in the trade of gas manufacture.

The evidence further shows that the lamp-black briquettes furnished to the defendant, and analyzed prior to April 8th, 1907, contained the same constituents as did the lamp-black fuel furnished to the defendant for its final test in March, 1910; that the defendant, prior to April 8th, 1907, and at all times thereafter, had knowledge of the exact chemical constituency of said lamp-black, and used such term in said contract of April 8th, 1907, and July 12th, 1909, with full knowledge and understanding that the lamp-black provided for in said contract was not and would not be chemically pure carbon.

The evidence is insufficient to support the finding in the respects mentioned.

### XXXII.

The court erred in making and filing the following portion of finding No. XVI, substantially and in effect as follows:

The lamp-black furnished by the plaintiff to the defendant during said final test was not fuel of the kind and character specifically provided for in the contract of July 12th, 1909.

It appears from the evidence that the lamp-black fuel furnished by the plaintiff to the defendant during said final test of said apparatus from March 10th to March 30th, 1910, was fuel of the kind and character specifically provided for in the contract of July 12th, 1909.

It further appears from the evidence that the defend-

ant had, at no time prior to July 12th, 1909, seen or examined any lamp-black produced as a by-product of oil-gas manufacture, made in the form of an ordinary building brick, except such lamp-black as was bricked at the plant of the Los Angeles Gas and Electric Company, and that the said Los Angeles Gas and Electric Company was at said time, and at all times thereafter, the only concern in the United States which produced and manufactured lamp-black bricks of the size and form of the lamp-black bricks supplied to the defendant in the operation of its water-gas set; that the Los Angeles Gas and Electric Company and the plaintiff at all times used in the manufacture of its lamp-black bricks the best and most efficient machinery known or procurable for such purposes, and there was no evidence that at any place in the United States lamp-black bricks were manufactured or produced, commercially, of a physical or chemical quality or character equal to or different from or better than those produced by the Los Angeles Gas and Electric Company and the plaintiff, and supplied to the defendant at all times for the operation of its said apparatus, and that between the 8th day of April, 1907, and the 12th day of July, 1909, the Los Angeles Gas and Electric Company had supplied to the defendant and the defendant had used in the operation of its water-gas set thousands of tons of lamp-black bricks, having a tensile strength and solidity less than the sample briquette furnished to the defendant prior to April 8th, 1907, and having a tensile strength not greater than the lamp-black bricks furnished to the defendant by the plaintiff between the period of March

10th to March 30th, 1910; and that at the time defendant entered into said contract of July 12th, 1909, it did not request of the Los Angeles Gas and Electric Company, nor even suggest, that the brick lamp-black fuel which should be supplied to it under said contract should have a tensile strength or solidity equal to the sample briquette furnished to it prior to April 8th, 1907, or a tensile strength or solidity greater than or different from the lamp-black bricks used by the defendant between the said April 8th, 1907, and the 12th day of July, 1909.

And the evidence further shows that the Los Angeles Gas and Electric Company did not at any time prior to the said 12th day of July, 1909, or on said date, or at any time thereafter represent to the defendant that the lamp-black fuel which would be supplied to it under said contract of July 12th, 1909, would have a tensile strength equal to the briquettes furnished to the defendant prior to April 8th, 1907, or different from or greater than the tensile strength and solidity of the lamp-black bricks furnished and supplied to the defendant between the 8th day of April, 1907, and the 12th day of July, 1909, or a tensile strength or solidity greater than that actually possessed by the lamp-black bricks which were later supplied by the plaintiff to the defendant during the period from March 10th to March 30th, 1910, and that after said 12th day of July, 1909, and at various times up to the 10th day of March, 1910, the plaintiff furnished and supplied to the defendant thousands of tons of lamp-black brick fuel possessing a tensile strength and solidity not greater than that possessed by



the lamp-black bricks theretofore furnished to the defendant and thereafter furnished to the defendant during the final test of said apparatus, and the defendant at no time prior to the 20th day of March, 1910, claimed, suggested, or even intimated that the lamp-black fuel furnished and supplied by the plaintiff or its assignor at any time prior thereto possessed a tensile strength or solidity, or physical quality different from that which the plaintiff or its assignor had, either in the contract of April 8th, 1907, or the contract of July 12th, 1909, agreed to furnish or supply to the defendant, but, on the contrary, the defendant had during the months following November, 1909, up to the first day of March, 1910, witnessed the production and storage by the plaintiff in its yards of 3,000 tons of lamp-black bricks which the plaintiff stated to the defendant that it intended to furnish and supply to the defendant during the final test of its said apparatus, and which the defendant expected the plaintiff would furnish and supply to it at said time, and that it had the opportunity to, and did at various times examine such fuel and test the same, and did, in the latter part of December, 1909, inform the plaintiff in writing that said 3,000 tons of lamp-black brick fuel was satisfactory and would be suitable to the defendant as fuel for use during the final test of its said apparatus, under the contract of July 12th, 1909.

The evidence further shows that all of the fuel furnished by the plaintiff to the defendant was taken from said pile of 3000 tons of lamp-black bricks which had theretofore been supplied to the defendant, and were all the lamp-black bricks furnished by the plaintiff to the

defendant during the final test of said apparatus, and were lamp-black bricks of the best quality, both physically and chemically, that it was possible for the plaintiff or any other person at said time to manufacture or produce.

The evidence is insufficient to support the finding in the respects mentioned.

XXXIII.

The court erred in making and filing the following portion of finding No. XVI as follows:

The lamp-black bricks furnished by the plaintiff to the defendant during said final test had been treated in such a manner as to "leave voids therein."

It appears from the evidence that in the manufacture of lamp-black bricks small air-chambers necessarily are formed in said bricks; that it is impossible to manufacture the same without the presence of said air spaces occurring at times in the said bricks.

The evidence is insufficient to support the finding in the respect mentioned.

XXXIV.

The court erred in making and filing the following portion of finding No. XVI as follows:

The said lamp-black bricks "had been insufficiently compressed."

There is no evidence that the lamp-black bricks furnished by the plaintiff to the defendant from March 10th to March 30th, 1910, were insufficiently compressed; but, on the contrary, it appears from the evi-

dence that all of the said bricks were compressed to as high a degree as possible; that the plaintiff is the only person in the United States engaged in the manufacture of lamp-black bricks and that in the production of the same the plaintiff used at all times the best possible machinery and methods; and no evidence was introduced during the trial of the production by anyone, or of the possibility of production, commercially, of lamp-black bricks compressed in any manner superior to the bricks produced by the plaintiff at said time and furnished to the defendant; that all of the lamp-black fuel furnished by the plaintiff to the defendant during said final test, was compressed to a degree and in a manner not inferior to any lamp-black bricks ever theretofore furnished to the defendant by the plaintiff.

The evidence is insufficient to support the finding in the respect mentioned.

### XXXV.

The court erred in making and filing the following portion of finding No. XVI as follows:

The said bricks furnished by the plaintiff to the defendant during said final test were “so unstable that they were not able to withstand, and did not withstand the jarring necessarily incident to handling the same for fuel purposes in such apparatus.”

It appears from the evidence that all of the lamp-black fuel furnished by the plaintiff to the defendant was sufficiently stable to withstand the jarring necessarily incident to handling the same for fuel purposes in the defendant’s apparatus. The evidence shows that

practically every brick delivered by the plaintiff to the defendant during said test was delivered at the base of the fuel chute of the defendant's apparatus in the perfect form of a brick, and that thereafter the handling of said fuel was conducted in such a manner as best suited the defendant, and entirely by its employees; that in the handling of said fuel, defendant carried the same to a great height in buckets, from whence it was dumped down into a bin in large quantities and from thence again dropped a great distance into the generator, which said handling necessarily resulted in the breaking up of a certain portion of the bricks; that the matter of handling said fuel was one lying solely in the power of the defendant, and that the defendant could have supplied the generator with fuel by the use of wheelbarrows and other devices which would practically have prevented any of the said bricks from breaking; that it is not unusual for lamp-black bricks to become broken in handling the same for fuel purposes in gas generators.

The evidence is insufficient to support the finding in the respect mentioned.

### XXXVI.

The court erred in making and filing the following portion of finding No. XVI as follows:

“Notwithstanding the protest of the defendant during said test, plaintiff did furnish to the defendant bricks which had been and were being throughout the entire test subjected to external, artificial heat, or kiln-drying, for the purpose of driving out moisture therefrom.”

It appears from the evidence that it is impossible to manufacture a lamp-black brick from crude lamp-black containing less than 15 to 20 per cent of moisture; that therefore, to the knowledge of the defendant, the plaintiff and its assignor at all times produced lamp-black bricks containing from 15 to 20 per cent of moisture when first made, and that all of said bricks were thereafter reduced in moisture content, either by drying the same in the sun or by means of artificial heat. The evidence shows that as early as December, 1909, the plaintiff had, in order to be able to furnish defendant with the best possible character of fuel for the final test of its apparatus, accumulated about 3000 tons of lamp-black bricks, which it proposed to furnish to the defendant during the final test of said apparatus; and the plaintiff had, by means of exposing said bricks to the sun for several months succeeded in reducing all of said bricks to a moisture content of less than 10 per cent; that during said month of December, 1909, the plaintiff did inform the defendant of the purpose for which it intended to use said 3000 tons of brick, and the defendant did thereupon examine said bricks, and stated to the plaintiff in writing that the same were satisfactory to it for use in said final test. The evidence shows that the plaintiff thereupon, at the suggestion of the defendant, covered said pile of bricks with sheet iron and other substances to protect the same from the rains which occurred in the spring; that during January, February and March, 1910, there was a large and excessive rainfall in the city of Los Angeles, and that a considerable portion of said 3000 tons of brick by reason of their

physical character, and without any fault on the part of the plaintiff absorbed considerable moisture from the atmosphere so that by the latter part of February a large portion of said bricks were of a moisture content greater than 10 per cent; that, thereupon, plaintiff did at great expense, to the knowledge of the defendant and without any protest from said defendant, proceed to drive the excessive moisture from said bricks in the only possible manner, to-wit, by repiling said bricks in the form of kilns and driving the moisture therefrom by means of artificial heat. The evidence shows that by employing said means the plaintiff did reduce the moisture content of all the said bricks furnished to the defendant during its said final test to a degree less than 10 per cent, and that by the 10th day of March, 1910, all of said bricks furnished to the defendant during said final test had been dried to a proper degree of moisture; that thereafter, plaintiff ceased to apply said artificial heat to the said bricks.

The evidence further shows that the defendant at no time made any objection to the manner in which the plaintiff had dried the said bricks, or to the character of said bricks after drying, until about the 20th day of March, 1910, at which time it was impossible for the plaintiff to furnish or supply defendant with bricks any different from those which it was supplying to it; that bricks dried by means of artificial heat, or kiln-dried, possess a tensile strength as great, if not greater, than those bricks dried by means of the sun, and are in all other respects identical with lamp-black bricks dried by means of natural sun heat.

The evidence is insufficient to support the finding of the court in the respects mentioned.

XXXVII.

The court erred in making and filing the following portion of finding No. XVI as follows:

The plaintiff did furnish the defendant during said test bricks which were “unstable and easily disintegrated.”

It appears from the evidence that all of the bricks furnished to the defendant by the plaintiff, during the final test, were as above set forth more particularly in our assignment of errors the most suitable bricks which it was possible for the plaintiff or any other person to produce, commercially, and that the said bricks were of such stability as to withstand all the necessary handling of the same incident to the preparation and drying of said bricks, and the hauling of the same to its generator, and that any breakage that thereafter occurred in said bricks was due to the handling of the same by the defendant’s agents; and that in the handling of the same by the defendant, said bricks were submitted to unusual and violent usage and handling, which caused a small portion of the same to become broken and disintegrated.

The evidence is insufficient to support the finding in the respects mentioned.

XXXVIII.

The court erred in making and filing the following portion of finding No. XVI as follows:

“Practically all of the bricks furnished to the defendant during said test were of such an unsubstantial

character that great quantities of them were necessarily broken up and crumbled in the handling of them.”

It appears from the evidence, as specified in the last assignment of error, that the lamp-black bricks were not of an unsubstantial character and were not necessarily broken up or crumbled in the handling of them; and it further appears from the evidence that only a small portion of the bricks supplied to the defendant did crumble up during the handling of the same by the defendant.

The evidence is insufficient to support the finding in the respect mentioned.

### XXXIX.

The court erred in making and filing that portion of finding No. XVI as follows:

“This crumbling and powdering took place to such an extent as that great quantities of fine pulverized and crumbled material unavoidably found its way into the generator, with the result that the fuel bed was packed, and its efficiency largely impaired, and with the further result that excessive and extraordinarily large quantities of dust were blown over from the generator into the carburetor and tended to form a deposit upon the brick work in the carburetor, and to materially retard its function and impair its capacity.”

It appears from the evidence that the reason why large quantities of fine carbon passed from the generator into the superheater was because the defendant's agent at the last moment before commencing the final test of said apparatus, contrary to the plan of operation outlined and contemplated by the defendant company's



president and engineers, doubled the amount of air blast injected into the generator of said apparatus, and that said excessive air blast was the reason why the large quantities of fine carbon were carried from the generator into the carburetor, and further, that the defendant under its contract of July 12th, 1909, specifically agreed to increase the capacity of said apparatus for catching and handling such fine dust as was apt to pass from the generator to the carburetor. The evidence shows that the defendant, subsequent to July 12th, 1909, doubled the size of the generator that it had theretofore used, and that the engineers of the defendant company, in considering whether they had provided sufficient capacity for handling said fine dust, which is necessarily expected to pass from the generator into the carburetor, only counted upon the operator of said apparatus using one-half of the amount of blast which said operator actually subjected said generator to during said final test of said apparatus, and that it was by reason of the aforesaid acts of the defendant and not otherwise that such large quantities of dust were carried from the generator into the carburetor and resulted in the impairment of the operating capacity of said machine.

The evidence is insufficient to support the finding in the respects mentioned.

#### XL.

The court erred in making and filing the following portion of finding No. XVI as follows:

“Throughout said test plaintiff continued to supply bricks of the character above described, to-wit, so en-

tirely lacking in firmness and stability as that practically all of them broke more or less in handling.”

It appears from the evidence that only a small percentage of the lamp-black bricks actually placed by the defendant in its generator were broken, and that practically every brick delivered by the plaintiff to the defendant at the base of its fuel chute was in a perfect brick form.

It appears further from the evidence that all the lamp-black brick furnished by the plaintiff to the defendant were lamp-black bricks possessing as great a degree of firmness and stability as possible for them to possess, and that all of said bricks did possess such a degree of firmness and stability as was required under the contract of July 12th, 1909.

The evidence is insufficient to support the finding in the respects mentioned.

#### XLI.

The court erred in making and filing the following portion of finding No. XVI as follows:

“Great quantities” (of the bricks furnished by the plaintiff) “crumbled and pulverized to such an extent that at times more than one-third and almost constantly as much as 15% or 20% was screened out as waste.”

It appears from the evidence that the term “waste” used in the above finding refers to the fine carbon dust which the defendant abstracted from the lamp-black fuel by means of large slits and holes which it placed in its fuel chute leading to the generator; that the percentage of fine carbon which the defendant thus removed was material which would have made good fuel

if used in said generator; and that the existence of said fine carbon was due almost entirely to the rough and violent manner in which the defendant handled said lamp-black fuel after it was delivered to it by the plaintiff. The evidence shows that the amount of fine carbon which the plaintiff obtained in using the lamp-black fuel furnished to it by the plaintiff during the final test of said apparatus was not greater than that encountered by the defendant at all times prior thereto in the operation of said apparatus.

The evidence is insufficient to support the finding in the respects mentioned.

#### XLII.

The court erred in making and filing the following portion of finding No. XVI as follows:

“At least as much more” (of the waste) “unavoidably went into the generator with the serious detrimental effects above described.”

It appears from the evidence that only a very small percentage of said fine carbon went into the generator, and that the effect of the presence of said fine dust in the generator would not have been detrimental to the said apparatus had it not been for the fact that the defendant's representative and operator used during the final test of said apparatus an air blast double in force to that which the defendant company had contemplated and designed that said apparatus should use and accommodate, and that by means of said excessive air blast a large portion of the fine carbon in the generator was blown from the generator into the carburetor before it could be consumed by the fire in the generator;

and that such a condition was without any fault on the part of the plaintiff.

The evidence is insufficient to support the finding in the respect mentioned.

### XLIII.

The court erred in making and filing the following portion of finding No. XVI as follows:

“In the operation of all gas apparatus it is customary and necessary” to shut down said apparatus at some regular interval for the purpose of burning out and cleaning out the apparatus.

It appears from the evidence that the contract of July 12th, 1909, between the defendant and the plaintiff's assignor did not contain any provision allowing the defendant to shut down its said apparatus for the purpose of burning out and cleaning out the same during the final test of said apparatus; but said contract, on the contrary, provided that during the final test of said apparatus, said machine should be operated for 20 consecutive days. It further appears from the evidence that while it is customary at the plaintiff's plant to cease making gas every seven days in order to burn out and clean out the generator, that such practice is followed with such generators as are kept in steady operation throughout the entire year; that it is not customary, and should not have been necessary in the operation of a gas generator for a twenty-day test, such as was provided for in the contract of July 12th, 1909, to shut down said apparatus at any time during the twenty-day test for the purpose of burning out and

cleaning out the same; and that said contract of July 12th, 1909, was entered into without any agreement, understanding or expectation that the said apparatus of the defendant should be shut down at any time during said final test for such purpose.

The evidence does not support the finding in the respect mentioned.

#### XLIV.

The court erred in making and filing the following portion of finding No. XVI as follows:

“A burning and cleaning out period of one day out of seven is a proper, practical and reasonable custom in the proper operation of such a water-gas set as is involved here.”

It appears from the evidence that a burning out and cleaning out period of one day out of seven is not a proper, practical and reasonable custom in the proper operation of such a water-gas set as that possessed by the defendant under such a twenty-day test as was provided for in said contract of July 12th, 1909; that the burning out and cleaning out period of one day in seven is a custom peculiar to the plaintiff company, and is a custom used and adopted only in the operation of such apparatus as are kept in continuous operation throughout an entire period of twelve months.

It further appears from the evidence that the contract of July 12th, 1909, does not provide for any such shutting down period during the final twenty-day test of defendant's apparatus; and that such event was not contemplated even by the parties at the time said contract was entered into.

The evidence is not sufficient to support the finding in the respect mentioned.

XLV.

The court erred in making and filing the following portion of finding No. XVI as follows:

“The average quantity of gas produced per 24 hours during the seventeen days on which the apparatus was actually operated was slightly in excess of two million cubic feet per day.”

It appears from the evidence that if the total amount of gas produced by said apparatus of the defendant from March 10 to March 30, 1910, is divided by a factor of 17, that the result would be an average of over 2,000,000 cubic feet per day; but the evidence shows that such portions of the 14th, 15th and 16th days of March, 1910, as was taken by the defendant to clean out its generator is, in gas-making practice, considered as part of the operating period of said apparatus, and that under the contract of July 12th, 1909, the average capacity of said apparatus of the defendant as demonstrated during its final test from the 10th to the 30th of March, 1910, is obtained only by dividing the total production of the gas produced during said period by a divisor of 20.

The evidence is insufficient to support the finding of the court in the respects mentioned.

XLVI.

The court erred in making and filing the following portion of finding No. XVI as follows:

“A test of 20 or more consecutive days was never had of the said apparatus.”

It appears from the evidence that a test of 20 consecutive days was had of said apparatus as in said contract of July 12th, 1909, provided; that on the 9th day of March, 1910, the defendant notified the plaintiff in writing that at 6 o'clock a. m. on March 10th, 1910, it would commence the final 20-day test of its said apparatus, as provided for in said contract of July 12th, 1909, and that at 6 o'clock a. m., March 10th, 1910, the defendant did commence the final test of said apparatus, and did prosecute the same for the next 20 consecutive days, to-wit, until 6 o'clock a. m., March 30th, 1910, at which time the defendant, of its own accord, ceased to operate said apparatus, and announced that it had completed the test of the same.

The evidence further shows that during said test and at all times the plaintiff had fully performed each and every obligation and condition upon its part to be performed under said contract of July 12, 1909, and had during the said final test of said apparatus furnished and afforded the defendant all the operative conditions and character of fuel required to be furnished by it under said contract of July 12th, 1909.

The evidence is insufficient to support the finding in the respects mentioned.

#### XLVII.

The court erred in making and filing the following portion of finding No. XVI as follows:

“A test of 20 or more consecutive days was never had

of the said apparatus with fuel of the character and quality provided to be furnished by the plaintiff to the defendant in the said contract.”

It appears from the evidence that a test of 20 consecutive days, as provided for in said contract of July 12th, 1909, was had of the said apparatus of the defendant in its operation from March 10th to March 30th, 1910, and that during said test said apparatus was furnished by the plaintiff with the character and quality of fuel which the plaintiff was obliged to furnish the defendant under the contract of July 12th, 1909.

It further appears from the evidence that prior to the commencement of said test the defendant notified the plaintiff in writing that all of the fuel which the plaintiff then had on hand, and which it later furnished to the defendant during said test was satisfactory to the defendant; that all the fuel furnished to the defendant during said test was fuel of the kind and character which the parties contracted should be furnished under the contract of July 12th, 1909.

In assignments of errors heretofore set forth, plaintiff has set forth other particulars more in detail in which the aforesaid finding of the court is not supported by the evidence. All of the said particulars set forth in aforesaid mentioned assignments are made a part hereof with the same force and effect as if set forth herein.

The evidence is insufficient to support the finding in the respect mentioned.



XLVIII.

The court erred in making and filing the following portion of finding No. XVI as follows:

“Nor was the test of the said apparatus carried on from the 10th to the 30th of March as aforesaid, such a test as the contract provided for.”

It appears from the evidence that the test of the said apparatus carried on from the 10th to the 30th of March, 1910, was such a test as the contract of July 12th, 1909, provided for; that during said test plaintiff at all times fully performed all conditions and obligations upon its part to be performed, and did during such test furnish and supply to the defendant all such operating conditions and fuel as in said contract provided; that the defendant did at the commencement of said test announce to the plaintiff in writing that the said test was a final test of said apparatus as in said contract of July 12th, 1909, provided.

The assignment of errors heretofore set forth, addressed to findings of the court similar in substance to the finding herein, which point out more in detail particulars in which the aforesaid finding is unsupported by the evidence, and all statements of evidence contained in the aforesaid assignment of errors are made a part hereof with the same force and effect as if set forth herein.

The evidence is insufficient to support the finding in the respect mentioned.

XLIX.

The court erred in making and filing the following portion of finding No. XVI as follows:

“Nor was the same such a test as would properly or fairly indicate or determine the capacity or economy of operation of said apparatus for 20 or more consecutive days, or as a permanent operating apparatus or otherwise.”

It appears from the evidence that the said final test of said apparatus was such a test as would and did fairly indicate and determine the capacity and economy of operation of said apparatus for 20 or more consecutive days, and its maximum capacity as a permanent operating apparatus. The evidence shows that all of the operative conditions, and all the fuel and material furnished and supplied by the plaintiff to the defendant during said final test of said apparatus was fuel and were operative conditions such as were called for under the contract of July 12th, 1909; that at the commencement of said test the said apparatus of the defendant was in a proper condition; and that during said test the said apparatus had produced more gas with better fuel economies than it had at any time theretofore during any operation thereof; that during said test the plaintiff fulfilled each and all the conditions upon its part to be fulfilled under the contract of July 12th, 1909.

The evidence is insufficient to support the finding in the respects mentioned.

#### L.

The court erred in making and filing that portion of finding No. XVII as follows:

“That during said test defendant repeatedly protested against the character of the bricks furnished.”

It appears from the evidence that prior to the commencement of said final test, the defendant notified the plaintiff in writing that the store of bricks which the plaintiff had on hand for use during said final test was satisfactory and would be acceptable to the defendant for use during said final test from the 10th to the 30th of March, 1910.

It further appears from the evidence that the defendant at no time protested against the character of the bricks furnished during said final test until at a time about the middle of the said test; that at said time the plaintiff did not have in its possession any bricks of a character different from or better than those which it was supplying to the defendant at that time, and had theretofore supplied to it during said test, or at any other time.

The evidence is insufficient to support the finding in the respect mentioned.

#### L.I.

The court erred in making and filing the finding that the plaintiff is not entitled to recover of the defendant the sum of \$28,323.45, or any part thereof.

It appears from the evidence that from March 10th to March 30th, 1910, the defendant made such a final test of its said apparatus as provided for in the contract of July 12th, 1909, and that during said test, and at all times, the plaintiff fully performed all the conditions and obligations on its part to be performed under said contract; that during said final test the said apparatus, without any fault on the part of the plaintiff, failed to produce for 20 consecutive days an average of at least

2,000,000 cubic feet of gas per 24 hours, and did, during said test, fail to produce gas with a consumption of not more than 35 pounds of lamp-black fuel, containing not more than 10 per cent of moisture, per thousand cubic feet of gas made; and that said apparatus during said final test failed to produce a good, commercial gas having an average candle-power of not less than twenty candles.

The evidence further shows that after the said test of said apparatus, the plaintiff demanded that the defendant pay to the plaintiff the sum of \$26,323.45, which the defendant has at all times refused to do; that plaintiff did at said time demand that the *defendant* remove its apparatus from the premises of said plaintiff, which the defendant at all times refused to do; that the reasonable cost of removing said apparatus was \$2000, and that under and by virtue of the contract of July 12th, 1909, the plaintiff was entitled to recover from the defendant the said sum of \$28,323.45.

## LII.

The court erred in failing to find and decide that the plaintiff is entitled to judgment against the defendant in the sum of \$28,323.45.

It appears from the evidence that from March 10th to March 30th, 1910, the defendant made a final test of its said apparatus as provided for in the contract of July 12th, 1909; that during said test, and at all times, the plaintiff fully performed all the conditions and obligations on its part to be performed under said contract. The evidence shows that during said final test, the said

apparatus, without any fault on the part of the plaintiff, failed to produce for twenty consecutive days an average of at least 2,000,000 cubic feet of gas per 24 hours; and did, during said test, fail to produce gas with a consumption of not more than 35 pounds of lamp-black fuel containing not more than 10 per cent of moisture per thousand cubic feet of gas made, and that said apparatus during said final test failed to produce a good, commercial gas having an average candle-power of not less than twenty candles.

The evidence further shows that after the said test of said apparatus, the plaintiff demanded that the defendant pay to the plaintiff the sum of \$26,323.45, which the defendant has at all times refused to do; that plaintiff did at said time demand that the defendant remove its said apparatus from the premises of said plaintiff, which the defendant at all times has refused to do; and that the reasonable cost of removing said apparatus was \$2000, and under and by virtue of the contract of July 12th, 1909, the plaintiff was entitled to recover from the defendant the said sum of \$28,323.45.

### LIII.

The court erred in failing to find and decide that the plaintiff was entitled to recover from the defendant the sum of \$26,323.45.

It appears from the evidence that from March 10th to March 30th, 1910, the defendant made such a final test of its said apparatus as was provided for in the contract of July 12th, 1909, and that during said test, and at all times, the plaintiff fully performed all the

conditions and obligations on its part to be performed under said contract; that during said final test the said apparatus, without any fault on the part of the plaintiff, failed to produce for 20 consecutive days an average of at least 2,000,000 cubic feet of gas per 24 hours; and did, during said test, fail to produce gas with a consumption of not more than 35 pounds of lamp-black fuel containing not more than 10 per cent of moisture, per thousand cubic feet of gas made; and that said apparatus, during said final test, failed to produce a good, commercial gas having an average candle-power of not less than 20 candles.

The evidence further shows that after the said test of the said apparatus, the plaintiff demanded that the defendant pay to the plaintiff the sum of \$26,323.45, which the defendant has at all times refused to do; and that under and by virtue of the said contract of July 12th, 1909, the plaintiff was entitled to recover from the defendant the said sum of \$26,323.45.

#### LIV.

The court erred in failing to enter judgment against the said defendant and in favor of the plaintiff for the sum of \$28,323.45.

It appears from the evidence that from March 10th to March 30th, 1910, the defendant made such a final test of its said apparatus, as provided for in the contract of July 12th, 1909; that during said test, and at all times, the plaintiff fully performed all the conditions and obligations on its part to be performed under said contract; that during said final test the said apparatus,

without any fault on the part of the plaintiff, failed to produce for 20 consecutive days an average of at least 2,000,000 cubic feet of gas per 24 hours, and did, during said test, fail to produce gas with a consumption of not more than 35 pounds of lamp-black fuel, containing not more than 10 per cent of moisture, per thousand cubic feet of gas made, and that said apparatus during said final test failed to produce a good, commercial gas having an average candle-power of not less than twenty candles.

The evidence further shows that after the said test of said apparatus, the plaintiff demanded that the defendant pay to the plaintiff the sum of \$26,323.45, which the defendant refused and has at all times so refused to do; that the plaintiff did at said time demand that the defendant remove its apparatus from the premises of said plaintiff, which the defendant at all times refused to do; and that the reasonable cost of removing said apparatus was \$2000, and that under and by virtue of the contract of July 12th, 1909, the plaintiff was entitled to recover the sum of \$28,323.45 from the said defendant.

#### LV.

The court erred in failing to enter judgment against the said defendant and in favor of the said plaintiff in the sum of \$26,323.45.

It appears from the evidence that from March 10th to March 30th, 1910, the defendant made such a final test of its said apparatus as provided for in the contract of July 12th, 1909, and that during said test, and at all

times herein, the plaintiff fully performed all the conditions and obligations on its part to be performed under said contract; that during said final test the said apparatus, without any fault on the part of the plaintiff, failed to produce for 20 consecutive days an average of at least 2,000,000 cubic feet of gas per 24 hours, and did during said test fail to produce gas with a consumption of not more than 35 pounds of lamp-black fuel containing not more than 10 per cent of moisture per thousand cubic feet of gas made; and that said apparatus during said final test failed to produce a good, commercial gas having an average candle-power of not less than twenty candles.

The evidence further shows that after the said test of said apparatus, the plaintiff demanded that the defendant pay to the plaintiff the sum of \$26,323.45, which the defendant refused at all times to do, and that under and by virtue of the contract of July 12th, 1909, the plaintiff was entitled to recover from the defendant the said sum of \$26,323.45.

#### LVI.

The court erred in failing to find that the lamp-black fuel furnished by the plaintiff to the defendant, during said final test, was fuel in accordance with the contract of July 12th, 1909.

It appears from the evidence, as set forth in assignment of error No. XXXII, that all of the lamp-black fuel which was furnished to the defendant by the plaintiff during said final test from the 10th to the 30th of March, 1910, for use in its said apparatus, was fuel in accordance with the contract of July 12th, 1909.



The statements as to what the evidence showed in this regard, contained in said assignment of error No. XXXII, are made a part hereof with the same force and effect as if set forth in detail herein.

LVII.

The court erred in failing to find that the operation of said water-gas apparatus by the defendant during the period from March 10th to March 30th, 1910, was a final test of said apparatus as contemplated and provided for in said contract of July 12th, 1909.

It appears from the evidence that the operation of said water-gas apparatus by the defendant during the period from March 10th to March 30th, 1910, was a final test of said apparatus as contemplated and provided for in said contract of July 12th, 1909; that prior to the commencement of said final test, the defendant notified the plaintiff in writing that on the 10th day of March, 1910, it would commence the final test of its apparatus; that on the said 10th day of March, 1910, the defendant did commence said final test, and did operate said apparatus continuously for the next twenty days; and that during said test the plaintiff, at all times, furnished the defendant with operating conditions and fuel in accordance with the contract of July 12th, 1909, and in all other respects fully complied with the conditions and obligations of the said contract of July 12th, 1909.

LVIII.

The court erred in failing to find that the defendant during said final test of said apparatus from March

10th to March 30th, 1910, inclusive, failed to bring its said water-gas apparatus to an established capacity, as provided in said contract of July 12th, 1909, of at least 2,000,000 cubic feet of gas per 24 hours.

The evidence shows that during the final test of said apparatus from March 10th to March 30th, 1910, the defendant failed to bring its said apparatus to an established capacity, as provided in said contract of July 12th 1909, of at least 2,000,000 cubic feet of gas per 24 hours; and that said failure was not due to any fault of the plaintiff; that the operation of said apparatus during said period was such a final test of said apparatus as in said contract of July 12th, 1909, provided; and that said plaintiff at all times fully performed all conditions upon its part to be performed under said contract.

#### LIX.

The court erred in failing to find that during said period, to-wit, from March 10th to March 30th, 1910, said defendant failed to bring said apparatus to an established capacity of producing gas with a consumption of not more than 35 pounds of lamp-black fuel per thousand cubic feet of gas made.

The evidence shows that from March 10th to March 30th, 1910, the said apparatus was operated under and according to the terms of the contract of July 12th, 1909, in a final test of said apparatus; that during said test the plaintiff at all times performed all the conditions and obligations upon its part to be performed under said contract; and that said apparatus, during said final test, and without any fault on the part of the

plaintiff, failed to reach an established capacity, as in said contract provided, of producing gas with a consumption of 35 pounds of lamp-black fuel per thousand cubic feet of gas made.

LX.

The court erred in failing to find that during said final test of said apparatus from March 10th to March 30th, 1910, inclusive, the defendant failed to bring said apparatus to an established capacity of producing during said period gas of an average candle-power of at least 20 candles.

It appears from the evidence that from March 10th to March 30th, 1910, inclusive, the defendant operated said apparatus in a final test, as in said contract of July 12th, 1909, provided; that during said test the plaintiff at all times performed all conditions and obligations upon its part under said contract; that during said test the defendant, without any fault on the part of the plaintiff, failed to bring said apparatus to a capacity of producing, during said period, gas of an average candle-power of at least 20 candles.

LXI.

The court erred in failing to find that the plaintiff had at all times performed all the conditions and obligations imposed upon it by and under the said contract of July 12th, 1909.

It appears from the evidence that the plaintiff at all times performed all the conditions and obligations imposed upon it by and under said contract of July 12th, 1909. It was admitted by the defendant, that the plain-

tiff performed all the conditions upon its part to be performed under said contract, with the sole exception that the lamp-black fuel furnished by the plaintiff to the defendant during the final test of defendant's said apparatus did not, according to defendant, possess the tensile strength and solidity required of it under the contract of July 12th, 1909.

As to the said lamp-black fuel, however, the evidence shows that the said fuel was fuel of the same character, and even better than the lamp-black fuel which had been furnished to the defendant by the plaintiff's assignor for two years prior to July 12th, 1909; that it was lamp-black fuel possessing all of the qualities which the parties contemplated that it should possess at the time the said contract of July 12th, 1909, was entered into, and that said lamp-black fuel had as great a tensile strength and solidity as was possible for the same to possess.

The evidence further shows that in manufacturing the lamp-black fuel furnished to the defendant during the final test of its said apparatus the plaintiff used the most modern processes, and that it was the only concern in the United States producing lamp-black fuel of the character herein referred to; that prior to the final test of said apparatus, the defendant notified the plaintiff that the fuel which the plaintiff later supplied to the defendant was satisfactory to the defendant in every respect for the final test of said apparatus. The evidence shows that the defendant was aware at all times of the fuel which the plaintiff intended to furnish to it during said final test, and had examined and tested the same and reported that it was satisfactory; that the de-

fendant at no time complained of the tensile strength of the fuel furnished to it during said final test, except from about the 20th of March, 1910, until the end of said test.

The evidence further shows that during the said final test the plaintiff furnished to the defendant the best possible fuel in its possession, and the only fuel which was possible for plaintiff to obtain or manufacture; and that all of the fuel furnished to the defendant during said final test was fuel having the tensile strength and solidity, and every other quality and characteristic provided for under the contract of July 12th, 1909.

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## BRIEF OF THE ARGUMENT.

### I.

The court erred in finding that the lamp-black fuel furnished by the plaintiff during the final test of the apparatus was not in accordance with the contract requirements, the said finding being unsupported by the evidence and being a decision against law.

#### (I) AS TO THIS FINDING BEING UNSUPPORTED BY THE EVIDENCE.

The foregoing finding of the court is the pivotal point in the case and practically all the other findings objected to by appellant are dependent thereon, and must fall, if the finding of the court in regard to the fuel was erroneous.

The court expressly found that during the final test of the defendant's apparatus from the 10th to the 30th of March, 1910, the apparatus failed to make the minimum quantity of gas specified in the contract of July 12, 1909, and that the apparatus failed to produce gas of the character and with the fuel economies specified and required under the terms of said contract. [Tr. p. 778.] So that if the plaintiff performed its obligations under the contract it was entitled to judgment.

The court further finds that the plaintiff in all particulars did fully perform all the conditions imposed upon it under said contract, with the one exception, to-wit: That the lamp-black fuel furnished by the plaintiff to the defendant during the final test of said apparatus did not have a certain quality, that is, a tensile strength equal to that which the court believed the fuel, with which the plaintiff was obliged to supply the de-



fendant under the terms of the contract, should have. [Tr. pp. 782-783.] This adverse finding is based entirely upon an alleged oral representation made by the gas company to defendant's representative more than two years prior to the time of the execution of the contract in suit, the said representation forming a part, of the negotiations preceding and leading up to an earlier and different contract entered into between the parties in April, 1907. Plaintiff claims that said representation, if made in 1907, did not as a matter of fact, and cannot as a matter of law, form a part of the contract in issue, dated July 12, 1909.

As related to this finding, the court necessarily found that by reason of this alleged failure to supply the right quality of fuel, a final test of the apparatus, such as was contemplated by the contract, was never had. [Tr. p. 785.]

Defendant's contention that a guarantee of the form and quality of the lamp-black was a part of the contract of July 12, 1909, is based on the one fact that in March, 1907, plaintiff's agent gave defendant's representative a small lamp-black briquette and stated that the fuel which would be furnished would be of "like quality," but in a different shape. [Tr. p. 408.] Defendant claims that this briquette had great tensile strength and that inasmuch as the lamp-black fuel furnished defendant during the final test under the contract of 1909, did not have an equal tensile strength, that plaintiff failed to perform the contract in this regard, that no final test under the contract was had and that defendant is not responsible for the failure of the apparatus. It is evi-

dent, on the other hand, that if the plaintiff did furnish the defendant during the final test of said apparatus with a lamp-black fuel answering the description of that called for by the contract of July 12, 1909, then the test of the apparatus *was* the final test required by the contract, and the court having found that the apparatus failed, during said test, to make the minimum quantity of gas called for by the contract with the fuel economies therein specified, the judgment of the court for the defendant must be reversed.

The contract involved in this suit was a written contract entered into between the plaintiff's assignor, the Los Angeles Gas and Electric Company, and the defendant on the 12th day of July, 1909. For the convenience of Your Honors we insert it here in full:

"This agreement, made and entered into this 12th day of July, 1909, by and between the Western Gas Construction Company, a corporation of Fort Wayne, Indiana, party of the first part, and the Los Angeles Gas and Electric Company, a corporation of Los Angeles, California, party of the second part,

Witnesseth: Whereas, the parties hereto did on the 8th day of April, 1907, enter into a contract by which the party of the first part herein, agreed to furnish and install at the plant of the party of the second part an Extended Carburetter Superheater Water Gas Apparatus, and

Whereas, the said party of the first part did furnish and install at the plant of the party of the second part, an Extended Carburetter Superheater Water Gas Apparatus, and the party of the second part did pay the

party of the first part a portion of the contract purchase price therefor, to-wit: Twenty-six thousand eight hundred twenty-three and  $45/100$  (\$26,823.45) dollars, and

Whereas, litigation has arisen between the said parties hereto concerning the question as to whether or not the said Extended Carburetter Superheater Water Gas Apparatus furnished and installed by the party of the first part as aforesaid, was in accordance with said contract, and whether or not the said apparatus so furnished and installed, could produce the amount of gas guaranteed in said contract, and

Whereas, the parties hereto now desire to finally dispose of and settle the controversy which has arisen between them concerning said apparatus.

Now, therefore, be it agreed:

1. That the party of the first part will at once proceed, and with as much expedition as possible make such changes in said apparatus as it may desire for a preliminary experiment with said apparatus for the determination of the character of changes or alterations it may desire to make preparatory to a final test of said apparatus; that the said party of the first part will immediately after said preliminary experiment, and with as much expedition as possible, make such changes in said apparatus as it may desire for the final test, which changes shall in part consist of:

1st. A new generator or generators, in place of the present generator now a part of said set.

2nd. Provide ample means for the collection and easy removal of dust and fine carbon carried from the generator to the carburetter.

3rd. Provide ample and satisfactory means for scrubbing and condensing of gas made.

And that after said changes are made said party of the first part shall at once proceed to make gas with said set, of the kind specified in said contract, with the same economy of fuel and oil mentioned in said contract.

2. It is agreed that if in said test said party of the first part shall bring said apparatus to a gas making capacity of two million (2,000,000) cubic feet per twenty-four (24) hours, of the kind of gas mentioned in said contract, with the same economy of lamp-black fuel, containing not more than ten (10%) per cent moisture, and oil mentioned in said contract, then the party of the first part will accept as full payment for said apparatus twenty-six thousand (\$26,000.00) dollars, and in making this payment, twenty-six thousand (\$26,000.00) dollars of the sum of twenty-six thousand eight hundred twenty-three and  $45/100$  (\$26,823.45) dollars already paid by the party of the second part, to party of the first part, shall be deemed as the payment hereunder, the balance of said sum, to-wit, eight hundred twenty-three and  $45/100$  (\$823.45) dollars, to be returned by said first party to party of the second part.

If the party of the first part shall, in said test, bring said apparatus to the capacity of two million seven hundred and fifty thousand (2,750,000) cubic feet per twenty-four (24) hours of the kind of gas specified in said contract, with the same economy of lamp-black fuel, containing not more than ten (10%) per cent moisture, and oil mentioned in said contract, then the party of the first part will accept as full payment for

said apparatus the original contract price, to-wit, thirty-five thousand six hundred ninety-four (\$35,694.00) dollars, the payment of twenty-six thousand eight hundred twenty-three and  $45/100$  (\$26,823.45) dollars already made by party of the second part to be applied on the payment aforesaid.

And it is agreed that if said party of the second part shall during said test, bring said apparatus to a gas making capacity between two million (2,000,000) cubic feet per twenty-four (24) hours and two million seven hundred and fifty thousand (2,750,000) cubic feet per twenty-four (24) hours, of the kind of gas mentioned in said contract, with the same economy of lamp-black fuel, containing not more than ten (10%) per cent moisture, and oil mentioned in said contract, said party of the second part will pay for said apparatus for each fifty thousand (50,000) cubic feet of gas per twenty-four (24) hours capacity over and above two million (2,000,000) cubic feet per twenty-four (24) hours, a sum proportionate between the said sum of twenty-six thousand (\$26,000.00) dollars herein agreed to be paid for said two million (2,000,000) cubic feet capacity per twenty-four (24) hours, and the sum of thirty-five thousand six hundred and ninety-four (\$35,694.00) dollars, for said two million seven hundred and fifty thousand (2,750,000) cubic feet capacity per twenty-four (24) hours, and in making any of the aforesaid payments, the amount of twenty-six thousand eight hundred twenty-three and  $45/100$  (\$26,823.45) dollars already paid by the party of the second part shall be applied on the payment thereunder.

And it is agreed that the capacity of said apparatus shall be determined solely as follows: The party of the first part shall notify the party of the second part when it is ready for the final test of said apparatus, and the average capacity per twenty-four (24) hours of said set during said test, which shall not be less than twenty (20) consecutive days, shall constitute the capacity of said apparatus for all the purposes hereunder.

3. And the party of the first part agrees that if said party of the first part cannot, during said test, bring said apparatus to an established capacity as herein defined, of at least two million (2,000,000) cubic feet per twenty-four (24) hours, of the kind of gas specified in said contract, with the same economy of oil and lamp-black fuel containing not more than ten (10%) per cent of moisture mentioned in said contract, said party of the first part will remove at once without any cost to the party of the second part, said apparatus from the premises of the party of the second part, and repay to said party of the second part all money heretofore paid or advanced by said party of the second part to said party of the first part under said contract, to-wit: Twenty-six thousand eight hundred twenty-three and 45/100 (\$26,823.45) dollars.

In witness whereof, the parties have hereunto affixed their hands and the seals by their agents duly authorized.

THE WESTERN GAS CONSTRUCTION COMPANY.

By B. S. PEDERSON, *Agent*.

LOS ANGELES GAS AND ELECTRIC COMPANY.

By T. P. MCCREA, *Purchasing Agent*.

Approved as to form.

WM. A. CHENEY, *General Counsel.*"

(a) *Contemporaneous construction of the contract by the parties.*

It will be noticed from reading this contract that the only mention therein of the character of the lamp-black fuel to be used in the apparatus is that the fuel shall be lamp-black "containing not more than ten (10%) per cent moisture." The court will notice that nowhere in this contract is there any requirement that the lamp-black fuel shall be *bricked* or furnished to the defendant in any specific form or manner, or shall possess any degree of hardness or tensile strength.

The contract of July 12, 1909, by its terms refers to a prior and absolutely independent contract which was entered into between the same parties in April, 1907 [Tr. p. 9], but the reference made to that contract is in regard only to the quantity of lamp-black fuel and oil with which the defendant agreed, in the contract of 1907, to produce a thousand feet of gas, to-wit: 35 pounds of lamp-black and four and a half gallons of crude oil. As recited in the contract of July 12, 1909, the parties to the contract of 1907 had a serious disagreement as to whether or not the apparatus which the defendant had installed at the gas company's plant had proven to be in accordance with the requirements of the contract of 1907. The parties therefore entered into the contract of 1909, which is by its terms entirely independent and in substitution of the contract of 1907. The contract of 1907 thereupon became abrogated and none of its provisions form any part of the contract of 1909. The only use that is made of the contract of 1907 is, as we have said, that the contract of 1909 re-

fers to it for the sole and only purpose of showing the "quantity" of lamp-black fuel and of oil which the defendant was entitled to use in producing a thousand feet of gas.

If, therefore, the term lamp-black fuel, contained in the contract of 1909, is uncertain or ambiguous as to its meaning, it is of course allowable for the court to inquire into the conduct or situation of the parties to the contract *at the time* the contract of July, 1909, was entered into. The provision of law which enables the court to construe a contract by taking into consideration facts in addition to those set forth in the contract itself, necessarily limits the court's inquiry to the actions and situation of the parties to the contract at the time the contract was entered into, or, at most, immediately prior thereto.

In *Baldwin v. Napa etc. Wine Co.*, 1 Cal. App. 215, 218, the court says:

"The contemporaneous and practical construction of a contract by the parties, is strong evidence of the meaning of equivocal terms."

In the case of *Leschen & Sons Rope Co. v. Mayflower etc. Co.*, 173 Fed. 855, the court said:

"The purpose of all interpretation is to ascertain and give effect to the intentions of the parties expressed by their writings. The basic rule for the discovery of those intentions is that the court, so far as possible, should put itself in the place of the parties to the contract when their minds met upon the terms of the agreement, and then from a consideration of the writing itself, of its purpose and of the circumstances which conditioned its making, endeavor to ascertain what they intended to agree



to, upon what sense and meaning of the terms they used their minds actually met.” (Citing cases.)

“The construction which the parties give to a contract prevails where the language used will reasonably allow such construction.”

*Kennedy v. Lee*, 147 Cal. 606.

In *Manhattan Life Ins. Co. v. Wright*, 126 Fed. 87, the court said:

“The practical interpretation given to their contracts by the parties to them, while they are engaged in their performance, and before any controversy has arisen concerning them, is one of the best indications of their true intent, and courts that adopt and enforce such a construction are not like to commit serious error.”

The rule was expressed as follows in *Moore v. Beiseker et al.*, 147 Fed. 367, 77 C. C. A. 545, cited with approval in *Texas Star Flour Mills Co. v. Moore*, 177 Fed. 751:

“There has never been any rule of construction of contracts more instinct with the spirit of justice and practical sense than that which declares that, where the provisions of a contract become the subject of controversy between the parties, the practical interpretation placed thereon by their acts, conduct, and declarations is of controlling force. This for the reason that the interest of each leads him to a construction most favorable to himself, and, when differences have become serious and beyond amicable adjustment, it is the better arbiter.”

So it was said in *Long-Bell Lumber Company v. Stump*, 86 Fed. 578, 30 C. C. A. 264:

“Courts may use the actual construction put thereon by the conduct of the parties under the contract as a controlling circumstance to determine

the construction which should be put upon the contract in enforcing the rights of the parties. 'The most satisfactory test of ascertaining the true meaning of a contract is by putting ourselves 'in the place of the contracting parties when it was made, and then considering, in view of all the facts and circumstances surrounding them at the time it was made, what the parties intended by the terms of their agreement.' And when this intention is made clear by the course of their subsequent dealing and action thereon, it must prevail in the interpretation of the instrument, regardless of inapt expressions or careless recitations."

Seeking an interpretation of the meaning of the parties by the term "lamp-black fuel," we will view the situation and conduct of the parties to the contract at the time the contract was entered into, and thereby arrive at a correct understanding of what was in the minds of the parties at that time.

We find the gas company engaged in the manufacture of commercial gas from crude oil, by which process a by-product is derived, which is known in the gas-making world as lamp-black. [Tr. p. 397.] The gas company was accustomed to take this lamp-black as it came from the generators, combined with a large amount of water, conduct it into settling pits (where the water was evaporated, leaving the lamp-black settled in the bottom of the pits), thence to dig it out in large lumps and feed it into the gas making generators in the rough lump form [Tr. pp. 474-5, also pp. 195-197], or else the lamp-black was taken to a machine known as a Cummer dryer, where it was subjected to a process of drying to a degree of moisture content not exceeding from fifteen (15%) to twenty (20%) per cent, in which state it was

taken to a machine and pressed into the form of ordinary building bricks, and in this brick form used in the gas making generators.

The evidence shows that the gas corporation was the only concern known that converted its lamp-black into this brick form [Tr. p. 479], and no one testified during the trial to have ever seen lamp-black bricks thus commercially made in any other place in the United States [Tr. p. 508], or made in any manner different from that adopted by the gas corporation. In other words, the gas corporation was the originator of this form of fuel for gas making. The uncontroverted evidence shows that the gas corporation was in the possession of the best process obtainable for the purpose of converting its crude lamp-black into the form of bricks. [Tr. pp. 690-692.] The witnesses for the gas corporation testified that they had from time to time placed orders for the strongest and most efficient presses that the manufacturers could produce. [Tr. p. 691.]

At the time the contract of July 12, 1909, was entered into, the construction company had had two years experience at the gas company's plant with the character of lamp-black bricks which the gas company was manufacturing, and had used thousands of tons of the same in various tests which the construction company had conducted with the water gas apparatus that it had installed at the gas company's plant under the contract of 1907. There was no evidence introduced to show that the gas company at any time subsequent to July 12, 1909, pursued any method of lamp-black brick manufacture different in any manner whatever from

the methods it had pursued during the two years prior thereto, nor any evidence that the brick lamp-black fuel which was furnished to the defendant during the final test of its apparatus in March, 1910, was manufactured in any manner whatsoever different from the method of manufacture pursued by the gas company at all times prior to July 12, 1909. In other words, the bricks furnished the defendant in the final test were bricks manufactured in the identical manner with the bricks with which the defendant was at all times familiar prior to and at the time of the execution of the contract of July, 1909. [Tr. pp. 688, 689.]

Since the contract of July 12th, 1909, is silent as to the form in which the gas company was obligated to supply the lamp-black fuel to the defendant, if the court should believe that it was not optional with the gas company to supply this fuel in any commercial form, the court can only construe the contract as requiring that kind of lamp-black fuel which was in the *minds* of the parties to the contract and which was being used *at the time of its execution*. The court certainly will not hold that the parties *silently* contemplated that a character of fuel would be furnished which it was impossible to manufacture and which would possess characteristics which they had never seen before. The evidence shows that at the time the negotiations were being had between the parties relating to and culminating in the execution of the contract of July 12, 1909, that absolutely no mention was made by either party as to the form in which the lamp-black fuel should be supplied to the defendant by the gas company. [Tr. p. 195.]

The only witness who even attempted to state what the conversation was, if any, that took place between the parties in the negotiations leading to the execution of the contract of July 12th, 1909, concerning fuel, was the testimony of the plaintiff's purchasing agent, Mr. Luckenbach, who stated that, while there was considerable discussion between the parties concerning the fuel which had theretofore been supplied to the defendant, the only complaint made by the defendant, and the only point under discussion was its moisture content. [Tr. p. 195.] There is absolutely, as we have heretofore stated, no evidence of any agreement or understanding between the parties at the time the contract of 1909 was entered into, regarding the form in which the lamp-black fuel should be supplied, and we therefore submit that the only evidence to which the court can look in its endeavors to gain additional information as to the meaning of the term lamp-black fuel, should it believe that such additional information is necessary, is to consider what was the character of the lamp-black fuel which the parties were using at the time this contract of July 12, 1909, was entered into, and immediately theretofore.

That the fuel furnished the defendant in the final test of its apparatus was equal to the fuel on hand and in use in July, 1909, is shown by the testimony of the plaintiff's witnesses to the effect that the fuel furnished the defendant during the final test of the apparatus was the best lamp-black brick ever manufactured by the gas company. [Tr. pp. 694, 732, 644.] In fact, part of it was the same identical lot of fuel. [Tr. pp. 687, 688.]

Opposing this statement of the plaintiff's witnesses is the testimony of the defendant's two operators (who had failed to make good), who stated merely that the lamp-black bricks furnished to the defendant during the final test were not as good as some bricks which were supplied to the defendant for a preliminary trial of the apparatus (we call the court's attention to the time) *in January and February, 1910* [Tr. pp. 566, 527], but the defendant introduced absolutely no evidence to show that the lamp-black bricks furnished during the final test in March, 1910, were inferior or different in any respect from the lamp-black bricks with which the defendant was familiar in July, 1909, or different from the lamp-black bricks which the defendant had at all times theretofore received from the gas company and used during its operations at the gas company's plant. Such a comparison is the only one that can have any weight in this case.

If, therefore, the determination of the question as to whether or not the fuel supplied by the gas company during the final test was such fuel as called for by the contract rests upon the practical and contemporaneous construction of the parties;—that is, upon a comparison of the fuel furnished during the test with the fuel with which the parties were familiar *at the time* the contract of 1909 was entered into, as it necessarily must, then the finding of the court herein objected to must fall, because there is absolutely no evidence to sustain the court's finding, and it is directly contrary to the uncontroverted evidence introduced on the part of the plaintiff to the effect that the fuel furnished in March,

1910, was equal to and even superior to that manufactured by the gas company and used by the defendant *at all times prior to July, 1909.*

(b) *Estoppel of defendant's objection to the lamp-black fuel furnished by the gas company during the final test of the apparatus.*

We desire briefly to outline the history of the particular lot of fuel supplied by the gas corporation to the defendant for the final test of its apparatus in March, 1910. The estimated consumption of lamp-black fuel for this final test, as given to the gas corporation by the defendant, was three thousand (3000) tons for the twenty (20) days during which the test would last. [Tr. p. 198; exhibit 9.] The gas corporation's capacity for producing lamp-black bricks was not more than thirty (30) tons per day [Tr. p. 241], and as it was required under the terms of the contract that all of the lamp-black fuel supplied during the test should have a moisture content not exceeding ten (10%) per cent, it was necessary for the gas company to commence to store up a sufficient quantity of lamp-black fuel for this final test many months in advance of the test, for two reasons: First, in order that a sufficient quantity of fuel might be on hand; and second, that the fuel might have a chance to become sufficiently dry to meet the requirements of the contract.

Under the contract of July, 1909, the construction company was given the right forthwith to institute a preliminary test of its apparatus in order to determine what character of changes or additions it desired to make to prepare the apparatus for a final test. It was

optional with the defendant how long it should conduct this preliminary test, and it was optional with it how long it should take in making its changes and additions, so that the gas corporation was not able to foresee with any degree of certainty when it would be called upon to supply the defendant with 3000 tons of fuel for the final test. In order not to be caught napping at the time when the defendant should conclude to carry out its final test, the gas company commenced the preparation of the fuel to be used in the final test as early as July, 1909. [Tr. p. 375.] At this time, there was on hand a considerable quantity of lamp-black bricks [Tr. pp. 355-356], a large portion of which had been kiln dried and had formed a portion of a quantity of bricks which the gas company had been previously furnishing to the defendant in the tests and operation of its apparatus under the contract of 1907, and which the defendant had at that time stamped with its approval. [Tr. pp. 191, 687.]

The gas company added to the bricks which it had on hand on July 12, 1909, enough bricks to bring the total quantity to three thousand (3000) tons, and this quantity of bricks was, to the knowledge of the defendant, expressly set aside for use in the final test of its apparatus. And the defendant's operators and its Pacific Coast agent, Mr. Pederson, saw these bricks from time to time and in December, 1909, Mr. Pederson wrote the following letter to the gas company, dated December 28, 1909 [plaintiff's exhibit No. 15, Tr. vol. 1, p. 207]:



“Mr. C. A. Luckenbach, Manager of Construction, Los Angeles Gas & Electric Corporation, Los Angeles, Cal.

Dear Sir: In confirmation of our conversation this morning, I beg to state that we desire to withdraw our letter of December 13th in reference to the fuel to be used during the test of the water-gas apparatus now being installed by us. *The fuel that you have on hand at present will be satisfactory*, but we feel that it must be protected from additional moisture, and would ask that you protect the fuel that you have ready for us from rain and other moisture that may be precipitated upon it.

Yours respectfully,

THE WESTERN GAS CONSTRUCTION COMPANY.

By B. S. PEDERSON, *Agt.*”

Mr. Luckenbach, the gas corporation's manager of construction, stated that upon the receipt of this letter he “gave instructions immediately to have it” (the fuel) “fully covered with tarpaulin, galvanized iron or other material that might be necessary to keep it from exposure to rain.” [Tr. p. 209.]

The plaintiff's witnesses testified that this fuel was immediately covered, as requested by the defendant, and kept so covered up until the time of the final test, and that every precaution possible was taken to prevent the fuel coming in contact with the rain or any moisture [Tr. 355-356], and there was no evidence introduced denying this or showing that the gas company was in any respect negligent or lax in the care of this fuel.

The evidence shows that in the spring of 1910 the

rainfall was excessive, and that while none of this fuel came in direct contact with the rain, yet lamp-black bricks will absorb a certain percentage of moisture from the surrounding air. [Tr. p. 356.] These bricks were gone over and tested by plaintiff regularly prior to the final test. [Tr. p. 357.] The plaintiff showed that as early as December, 1909, practically every bit of these three thousand (3,000) tons of lamp-black bricks was reduced to a moisture content of less than ten (10%) per cent, but owing to the absorptive characteristics of lamp-black bricks, they did absorb some additional moisture, so that by the latter part of February, 1910, the average moisture content of the bricks was between fifteen (15%) and twenty (20%) per cent. [Tr. p. 356.] The gas company then subjected the bricks to the only known process for reducing the moisture content, namely, to a process of kiln drying, which was done by re-piling all of these bricks, at a large expense (exceeding fifteen hundred [\$1500.00] dollars for labor), and building fires under them and thereby reducing their moisture content to the contract requirements. [Tr. pp. 707-708.]

The evidence shows that the gas corporation was so desirous of furnishing the defendants with a fuel complying in every respect with the contract that it employed a chemist whose sole duty was to test every pile of bricks in its yard in order absolutely to determine that every brick delivered to the defendant had a moisture content of less than ten (10%) per cent [Tr. 310-322], and the defendant admits, and the court found, that all of the fuel supplied to the defendant conformed to the contract in this respect.

This process of kiln-drying the bricks took from two to three weeks. The defendant's operators in charge of their apparatus admitted that they had knowledge of the fact that the gas company was resorting to the process of kiln-drying in order to reduce the bricks to the proper moisture content [Tr. 426, 441], yet defendant did not testify that at any time it made the slightest objection to this practice on the part of the gas company [Tr. 509], neither did it suggest any plan or method other than this, whereby the gas corporation could have reduced this fuel to the proper moisture content required by the contract, and it was not until the 18th day of March, 1910, or nearly at the middle of the final test, that the construction company ever intimated, either in writing or orally, that it was in the slightest degree dissatisfied with the lamp-black fuel which was being furnished to it during the final test. [Tr. p. 223.] At the time the defendant made the complaint to the plaintiff, in the midst of the test, that the fuel was brittle and did not have as great a tensile strength as the defendant then desired, the gas company did not have in its possession any lamp-black bricks better than, or different in any respect from, those being supplied to the defendant [Tr. 509], and the uncontroverted evidence in the case (to which we will later refer specifically) was that it was physically impossible for the gas corporation or for anyone else to have manufactured, or to have supplied the defendant during the final test of its apparatus with lamp-black bricks having a tensile strength or any property or characteristic different from or superior to those

possessed by the bricks supplied to the defendant during the final test, which the defendant had specifically passed upon in December, 1909, as satisfactory [Tr. 207], which it had used in January and February, 1910, and made no complaint about, and which apparently were at all times satisfactory to it until in the very middle of its final test, when it found that the apparatus was making an absolute failure and that it would not be able to produce either the minimum quantity of gas provided for in the contract or comply with the fuel economy specified. It is too plain to require argument, that the only reason why the defendant made this eleventh hour complaint against the character of the fuel was to lay some foundation for resisting a law suit which would ultimately follow the failure to comply with the terms of its contract.

When this complaint was, for the first time, made it was impossible, as the construction company knew, to furnish any other bricks. These bricks had been specially prepared, set aside, inspected and approved, were used in the preliminary tests and were being used in the final test then under way. They had been manufactured and cared for by the gas corporation in reliance upon the construction company's assurance that they were satisfactory. After the final test commenced and some of these brick had been delivered and used the construction company was estopped from denying that they conformed to the contract.

“Where the buyer of railroad ties, knowing that the seller is buying and paying for ties for delivery, receives and inspects those delivered and makes a written

report to the seller, showing their acceptance, and thereby induces the seller to believe that like ties will be accepted, under a written contract, and they are shipped by the seller under that belief, the buyer is estopped from denying that the ties conform to the contract.”

*Richardson et al. v. Herbert*, 135 S. W. 628.

(c) *A provision in a contract should be construed so as to make its operation possible.*

The evidence and the findings of the court show that the gas company desired to acquire a water-gas apparatus of the kind which the defendant contracted to install in order to enable the gas company to use its lamp-black by-product. [Tr. p. 770.]

At the time the contract of July 12, 1909, was entered into, the defendant had had two years' experience in handling the lamp-black bricks manufactured by the gas company, and the gas company knew from experience the character of the lamp-black bricks which it was possible for it to manufacture. It could not, therefore, have been contemplated by the parties (especially when they made no written or oral expression on the subject) that under the terms of the contract the gas company was obligated to supply the defendant with a quality of fuel superior to that which it was commercially possible to manufacture and a quality of fuel superior and different from that which the gas company had ever theretofore manufactured. In other words, the contract must be construed in the light of reason, and if the evidence shows that the fuel which

was furnished the defendant during the final test of its apparatus from the 10th to the 30th of March, 1910, was the best fuel which it was possible for the gas corporation to manufacture, and was fuel equal, if not superior, to any with which the defendant was familiar *at the time* the contract of July 12, 1909, was entered into, then we submit that it is manifest that the court should not construe into the contract of 1909 an impossible requirement or provision. It is not material or pertinent that defendant's two operators testify that the fuel was not as good as a small quantity delivered them for a preliminary run, *after the execution of the contract*.

J. J. McDonald, one of the plaintiff's witnesses, testified in rebuttal [Tr. p. 644] that he had had about six years' experience in the manufacture of gas from lamp-black and that he was one of the operators who, under the direction of the defendant's engineers, ran the defendant's water-gas apparatus during its final test in March, 1910, and when questioned regarding the comparative qualities of the lamp-black fuel supplied the defendant at this time, testified as follows:

“Q. How did the bricks that were actually used in this gas-set during the test compare with the bricks that you were accustomed to use in your sets or the sets belonging to the gas company as to hardness and as to their keeping their form while being handled in the generator?”

A. These bricks are the best bricks that I ever handled in my experience in a water-gas set. The brick handled there were the best bricks I have used

in my experience with the Los Angeles Gas Corporation.

Q. When you say "best," you mean the best in what respect?

A. They were dry brick, and solid."

The gas corporation's assistant superintendent of gas manufacture, Mr. John Creighton, testified in rebuttal as follows:

"Q. Did you observe the bricks that were used by the Western Gas Construction Company during its final test as to their density or tensile strength and their behavior under handling?

A. Yes, sir.

Q. State whether or not those brick were different in that respect or either of those respects from the common run of bricks that were commonly used in your water-gas set.

A. It was commonly known that it was as good or better brick than we ever used or ever tried to use, and the trouble that we went to to get those bricks and have them fall below that moisture—it was better brick than we had ever used.

Q. Did you ever make or see made at the Los Angeles Gas and Electric Corporation's works any better or more substantial bricks than these from which the bricks used in this set were taken?

A. No, sir.

Q. From your experience in the operation of brick-presses in the manufacture of carbon brick, will you state whether or not it is practicable or possible to make any better or stronger brick than these were?

A. It is not.” [Tr. p. 694.]

Mr. D. J. Young, the plaintiff's superintendent of gas manufacture, testified concerning the fuel furnished the defendant as follows:

“Q. How did the brick furnished to this set during this test compare with the average run of brick that you used in your own water-gas set?

A. They compared very favorably. That is, these bricks are as good or better than our ordinary bricks.

Q. How did they compare in tensile strength and cohesiveness and ability to retain their shape?

A. I think the brick furnished them were a little better in that respect. The bricks that we ordinarily used were not as well dried as those bricks are.” [Tr. p. 732.]

The court can, if it desires, ascertain from reading the testimony of these three witnesses, set forth in full in the transcript, that these men are absolutely the best authority in the world upon the subject of the manufacture of bricks from lamp-black, for, as stated by witness Creighton, they “had had all the experience there was on the subject.” As opposed to the testimony of these three men, the only testimony introduced by the defendant which compared the tensile strength of the bricks furnished the defendant during the final test with any bricks with which the defendant had theretofore been familiar was the statement of their engineer, Mr. Pederson, and their operator, Mr. White, who stated that the bricks furnished during the final test were not in as good a condition or shape or could not stand handling as well as some bricks which had



been furnished to the defendant by the gas company for experimental purposes *during the preliminary test* SUBSEQUENT to the 12th of July, 1909 [Tr. pp. 527, 566], but neither Pederson nor any other witness testified that the bricks furnished or supplied were in any respect inferior to the bricks furnished to the defendant *prior* to July 12, 1909.

When questioned by the court as follows:

“To what cause or causes do you ascribe the failure of your test to even approximately reach in production the capacity to which you testify?”

Pederson replied:

“A. Entirely to the difference of the fuel that was provided for the generator.” [Tr. 525 and 526.]

“Q. (By the Court.) I will ask you one question: To what process could the lamp-black furnished by plaintiff for the test made between March 10th and March 30th, 1910, have been subjected to, so as to make bricks suitable for use in this apparatus of that set?”

A. The lamp-black should have been dried, as we expected it to be, down to below 10 per cent, and then pressed in a brick and solid brick. The lamp-black brick furnished us, by reason of the large amount of moisture at the time they were made, became, when the moisture was driven out, a porous, spongy mass.

Q. You claim that the lamp-black should have been brought to the desired degree of moisture before it was made in the form of bricks.

A. That is the idea.

Q. The imperfect process of which you complained is that the lamp-black was not dried or brought down

to the proper degree of moisture before being pressed into the form of brick; is that the idea?

A. Yes, sir." [Tr. 528 and 529.]

Mr. Pederson was the Pacific Coast representative of the defendant company and was the agent who entered into the contract in suit on behalf of the defendant and was the chief engineer in charge of the defendant's apparatus during its various tests at the gas company's plant, and in the above answers given to the questions of the court, Pederson sets forth the sole and only objection advanced by the defendant during the trial of the case as to the reason why their set made such a miserable failure, and the above statement of Mr. Pederson shows definitely the only objection that they had to the fuel furnished by the plaintiff was that the lamp-black was not dried to a moisture content of less than 10% *prior to its being bricked*, for he states, had the fuel been so treated, it would have been satisfactory and the test would have been more successful.

Having pinned the defendant down to this one position, we are able to demonstrate absolutely from the evidence the unsoundness of its position in this regard, for the following reasons:

The evidence shows without question:

1. That it is physically impossible commercially to manufacture a brick from lamp-black previously dried to a moisture content of less than ten (10%) per cent.
2. That the gas corporation, to the knowledge of the defendant, never at any time, either prior to or subsequent to the execution of the contract of July 12,

1909, had manufactured any bricks from lamp-black which had first been reduced to a moisture content of less than ten (10%) per cent.

3. That the three thousand (3000) tons of lamp-black fuel which the defendant's chief engineer, Mr. Pederson, in December of 1909, examined and stated to the plaintiff in writing was fuel satisfactory to the defendant for the final test of its apparatus, was lamp-black fuel which had been bricked from lamp-black having a moisture content greater than ten (10%) per cent at the time it was placed in the molds.

Even the defendant admits that the gas corporation is the only known concern which is manufacturing lamp-black into the form of bricks, and therefore its experience in the manufacture of these bricks must necessarily be the best and only evidence that could be introduced as to what is commercially possible to be done in handling a substance of this character.

On being referred to a lamp-black brick which the defendant had produced in evidence as being a sample of the fuel furnished them during the final test, Mr. John T. Creighton, the gas corporation's assistant superintendent of gas manufacture, stated:

"A. That is the same class of brick we *first made* and are *making now* on the press that that was made.

Q. What kind of a press were those bricks—speaking of your experience with bricks—what kind of a press were they made in?

A. They were made in an ordinary brick press, a fire-brick press from one of the fire-brick manufacturers in this city. It was a press taken from one of those houses, I believe.

Q. When did you install such a press in your works?

A. I believe it was in 1903, somewhere along about that.

Q. How many such presses have you had?

A. That was the only type of that kind, with a two-mould press. We had another that was a four-mold press that we got in about 1906 or 1907, I think. That was a four-mould press, pretty much the same type. It might have been a little stronger press \* \* \* and we tried for a long time to see how hard we could make them, and we found that we broke the presses all to pieces by *trying to make them hard out of dry stuff.*  
\* \* \*

Q. Now, you have had some experience with the making of these bricks from loose carbon?

A. Yes, sir. I had pretty near all the experience there ever was on it from the first day they ever tried to make them until the present day.

Q. Do you know from experience what difference it makes in the manufacture of these bricks from the loose carbon what the moisture conditions of loose carbon are?

A. Yes, sir, I was two or three years finding that out.

Q. By what means in 1910, if by any means, did you dry the loose carbon before bricking it?

A. We used a Cummer drier, to dry the carbon down to whatever moisture is feasible to brick the brick.

Q. Well, the Cummer drier dried the carbon down to any percentage you desired?

A. Not satisfactorily, it would not. It will dry them dry, but not practically.

Q. Practically, how dry will the Cummer drier make the loose carbon?

A. About 15 to 20 per cent.

Q. (By the Court.) That is, leave 15 or 20 per cent moisture in them?

A. Yes, sir, leave 15 or 20 per cent in the carbon as it comes out. If you go below that, it may explode just like gunpowder. When it gets drier than that, down say 5 or 10 per cent, you can't notice the moisture to any great extent, and the moisture will vary so great below 15 per cent without observing it, that any time after it is below 15 per cent with the 1,000 or 1,200 degrees temperature surrounding it, it is just liable to explode like the gas does. It had done it twice in our experience in the test of the machine when it was first installed.

Q. Now, after drying the carbon to any given or different percentages of moisture, what has been your experience with reference to the feasibility of making brick from the loose carbon, the loose carbon itself having different degrees of moisture content? State how that affects the brick-making.

A. In the brick-making part of it, they were making brick lower than 15 per cent moisture, *but it breaks the presses. It busts the wheels and busts the dies. We had it break a four-inch shaft in two, two or three times, on the very press that made that brick* (brick introduced in evidence by the defendant), *trying to make it drier than 15 per cent moisture.* It would stall

the press. We had an eight-inch belt on it and put a twelve-inch belt on it and ran the press to its final capacity and it stripped the gears sometimes of the cogwheel. We then tried to see if we couldn't get a stronger press, and while we were doing that, we ran this press to its limit of 15 or 20 per cent moisture and tried to keep it that way so as not to break the press down. We always thought it would be better if we could make brick a little drier, and we gave the firm that makes these briquette presses an open order to make us a press that was strong enough and big enough, within reasonable limits—to make us a press that was strong enough to press this stuff to a lower degree of moisture than what we had theretofore been able to do.

Q. Did you get any other press?

A. Yes, I was just coming to that—to state about the press that we got and explain the experience we had with it. We got a press that was built enormously strong, and we tried to brick it at a lower percentage of moisture than 15 per cent, and we broke that all to pieces.

Q. By bricking it to a moisture lower than 15 per cent, you refer to the powdered material.

A. Yes, sir.

Q. State from the experience you have gained in the operation of these presses what is the least moisture content of powdered carbon before bricking that can be used successfully in the bricking press.

A. Between 15 and 20 per cent." [Tr. pp. 685 to 692.]

Mr. Creighton then went on to state in his testimony

[Tr. p. 693 *et seq.*] that the reasons why lamp-black containing less than 15 per cent of moisture can not be successfully bricked were: First, that if the lamp-black is too dry when it is dumped into the moulds, too large a quantity of air is contained between the dry particles of lamp-black, with the result that when the stamp of the machine is driven in the mould, the compressed air either offers such a resistance that the machine is broken or the air is so compressed inside the brick that when the brick is released from the mould, the air which has been pressed inside the brick expands, causing the brick to crack or break open, and thus not only were the attempts to manufacture bricks from a dry lamp-black impossible from a mechanical standpoint because of the breakage of the machines, but the brick made was itself not as strong or desirable.

[Tr. p. 693 *et seq.*]

Mr. Creighton explains that the reason why the gas corporation endeavored to produce a brick from a dry lamp-black was not because they believed the final product would be a better brick, but because a large amount of money would be saved by producing a dry brick, for the reason that it would save the time and the large expense necessarily resulting from the handling of the wet brick in the process of either sun drying or kiln drying them in order to bring them to the proper moisture content, and further that the drying of the wet bricks necessitated the use of large areas of valuable land at the gas plant, which land could be used for other and valuable purposes, if a dry brick could have been produced. [Tr. 712, 713.]

Mr. Creighton's experience in this regard was confirmed by the testimony of his superior, Mr. D. B. Young, the gas corporation's superintendent of gas manufacture. That Mr. Young is an authority upon the subject of the bricking of lamp-black is apparent from the fact that the defendant in the cross-examination of Mr. Young upon the subject produced an article written by Mr. Young in one of the leading gas publications upon this very subject. Mr. Young testified concerning the possibility of making a brick from dry lamp-black as follows:

“Q. State what the different degrees or percentage of moisture in the loose material,—what effect it has upon the making of brick with that material.

A. With the brick machines that we use, *it is impossible to make bricks with material, say, of five to ten per cent.* We cannot get them to a hard and brick form—if we put more pressure on, the machine either breaks or stalls. With bricks made with fifteen or twenty, they retain their form in good shape and make good, satisfactory brick. Our average practice in making bricks is from twenty to twenty-five per cent moisture.

Q. You mean moisture in the loose material?

A. Yes, sir.” [Tr. p. 733.]

As opposed to the testimony of Mr. Creighton and Mr. Young, the only witnesses who had any experience in the manufacture for commercial purposes of lamp-black in the form of bricks, the defendant offered the testimony of its chief engineer, Mr. Pederson, and the testimony of a professor in a small local college, Mr.



Chandler, and in order that the court may see the immateriality, irrelevance and absolute worthlessness of their testimony, we will quote the same in full. Mr. Pederson's entire testimony on this subject is as follows:

“Q. Have you ever seen material dried first and then bricked?

A. To ten per cent?

Q. Yes.

A. I have seen them to this extent: That I made brick myself on a little *hand-press* with lamp-black containing 4 per cent moisture, and made a fairly substantial brick, although not of the thickness of the bricks used here. That was because of the apparatus that I had to experiment with. It was just one of these little hand-presses that they have in a brick-yard. But the brick I considered was fairly substantial. With a power-press I would say there was no difficulty at all to make a brick with a less percentage of moisture. My observation and what I have learned from other sources, confirms me in that statement, and my general knowledge of the material.” [Tr. pp. 427 and 428.]

We call the court's attention to the last clause of Mr. Pederson's testimony and then direct the court to other portions of Mr. Pederson's testimony where he has repeatedly stated that the only knowledge that he ever had upon the subject of bricking lamp-black was his knowledge gained at the plant of the Los Angeles Gas and Electric Corporation, and that the only bricks he ever saw made were bricks made there. [Tr. 479.] When cross-examined as to his above testimony, Pederson testified as follows:

“Q. Now, you speak of this hand press with which you made an experiment. What kind of a machine was it?

A. It was one of these little brick presses that they have in brick yards, I presume to test clays with or make forms.

Q. How large a brick does it make?

A. It makes a brick about the size of one of those bricks, but lamp-black being more compressible than clay, it only makes thin bricks about two inches in thickness.

Q. What length and breadth?

A. The same length and breadth, but it drives it down tighter.

Q. In your experiments you made a brick of the length and breadth of a common building brick, or about the length and breadth of these bricks here, but only—

A. About half the thickness. \* \* \*

Q. Where did you get the lamp-black from which this brick was made?

A. I made that brick in San Jose.

Q. And the lamp-black came from what?

A. An oil machine operated at that point.

Q. The San Jose Gas Works?

A. Yes, sir.

Q. When you got the crude lamp-black, was it in powder form or brick form or lump form or in what shape?

A. The crude lamp-black. We took it—probably containing 60 per cent moisture, and we put it on a

pan and spread it out on a connection between the generator and carburetor to dry, and let it dry five or six hours, and took it off and tested it for moisture, and we took it right out to the press and poured it into the press.

Q. Did you make any tar or hydrocarbon determination of this sample of lamp-black?

A. No, sir.

Q. What pressure is exerted in this press that you made the sample in?

A. I can't say.

Q. Have you here with you any sample made in the same press with the same lamp-black, containing a larger percentage of moisture at the time it was compressed?

A. I don't think I have it here. I have samples, but not here.

Q. After you spread this carbon out and dried it, did you then pulverize it?

A. *We stirred it up and worked it into the mould.* I didn't use any mortar or anything like that to pulverize it in. I stirred it up and *filled the mould and packed it in the mould with MY HAND.*

Q. Did you make any tensile strength determination?

A. I have made no determination whatever. I took the brick just as it came out of the machine, and I wanted to determine for my own knowledge just what it would do.

Q. Have you seen any other lamp-black bricking machine operating except the one of the Los Angeles Gas and Electric Company's works?

A. Yes, sir.

Q. Where?

A. In San Francisco.

Q. Did you ever see a commercial brick machine?

A. Yes, sir.

Q. Is it a brick machine or a briquette machine?

A. It is a combination of both. It makes a briquette probably four inches in diameter, and it is a continuous process something like a sausage machine.

Q. Does it make brick also?

A. No, sir.

Q. *Then, the Los Angeles press is the only brick-making machine that you have ever seen in operation?*

A. *It is.*

Q. It is not true in the San Francisco machine nor the Los Angeles machine that the moulds are packed in by hand?

A. Not to my knowledge." [Tr. pp. 476-9.]

The testimony of the defendant's local college professor was as follows:

"Q. Have you made any other efforts to ascertain what would be the effect upon a brick of drying it out by the application of considerable heat?

A. Yes, sir, I made about a dozen bricks in a *small mould* drying the material out first. In one case I dried it to 24 per cent moisture, in another case to 4 per cent moisture, and another case to a little over 1 per cent, and another case to 5 per cent of moisture, and then moulded the material into briquettes.

Q. What did you find to be the effect of applying heat to it?

A. I found that the best results that I got were obtained from the material which contained one per cent and possibly four per cent. Those two were the best brick. I think the one containing one per cent moisture was the best, although the two were fairly good. But the one which contained the 5 per cent moisture had lost a good deal of its hydrocarbon or binder, and it was impossible to make a coherent brick of that material, with the greatest pressure I could put on it. The material that had 24 per cent moisture, as it appeared then was somewhat damp, and of course was softer than the other brick.

Q. Did it brick well?

A. It bricked well enough, yes, but it was soft.

\* \* \*

Q. What size brick was it that you made?

A. It was about half the size of the briquette furnished by the company to the local customers.

Q. *What kind of a press did you make it in?*

A. *We had a cylinder and a plunger and a vise.*

Q. But you hadn't any experience with an actual commercial press, and as to the effect of different percentages of moisture in the loose carbon in the manufacture of brick in a commercial press.

A. *I have no experience, no, sir.*

Q. Was this two-inch brick that you made in the cylinder and plunger with one stroke of the compressor or one stroke of the plunger?

A. Yes, sir. The mould was something over twice as long as the brick made, and we filled it full, and then pressed it as hard as we could in the vise.

Q. By continued pressure—increasing the pressure from time to time.

A. Yes, sir. Turned it up as hard as we could turn it, and then shoved it out.

Q. That would be a pretty slow process of making brick, if you had to make them by the ton, wouldn't it?

A. Yes, sir." [Tr. pp. 758 and 765.]

The court will note that in both the tests made by Mr. Pederson and the college professor, that the lamp-black used was handled in a chemical laboratory fashion, was powdered and pulverized by hand and then packed into the mould with the fingers. It is needless to say that such experiments as this prove nothing and can have no legal weight as against the testimony of the plaintiff's witnesses, Young and Creighton, for it does not bear any relation to the question of manufacturing bricks commercially on a large scale. The very reason assigned by the plaintiff's experts as to why a brick can not be made from a dry lamp-black, namely, because of the excessive amount of air which would get into the mould with the dry lamp-black, is a reason which would of course not apply to the case of manufacturing a carbon brick in a laboratory, where the experimenter is able through the process of packing the mould first with his fingers, to drive out from the lamp-black all the air which would otherwise have been confined between the particles of dry carbon. So absolutely worthless is the evidence of the two witnesses of the defendant in this regard that we believe the court will be compelled to find that there is *no evidence* in the case contrary to the evidence of the plaintiff's wit-

nesses to the effect that it was impossible *commercially* to have produced lamp-black in a brick form from the raw lamp-black material containing less than ten per cent of moisture, and, if this is so, then the defendant Pederson when he replied to the court that the only complaint he had to make of the gas company's fuel was that the bricks were made from a lamp-black containing more than ten per cent of moisture, was registering a complaint which is barren of any value whatever in this controversy, for the court will not construe the contract so as to require an impossibility.

But assuming that it was physically possible to manufacture lamp-black bricks from crude lamp-black containing less than ten per cent of moisture, still that fact does not mean that the parties to the contract of July 12, 1909, contemplated that bricks of such a character should be supplied to the defendant, for certainly at the time this contract was entered into the gas company had by reason of its many experiments come to the conclusion that the production of a brick from a lamp-black containing less than ten per cent moisture was a physical impossibility. Hence the idea that the fuel which would be supplied the defendant under the final test would be fuel which had been bricked from lamp-black containing less than ten per cent of moisture could not have been an idea existing within the mind of the plaintiff, and since there must be a meeting of the minds in order to constitute a contractual agreement between parties, it is evident that both parties to this contract of 1909 did not agree that the fuel should be bricked from a dry lamp-black. Furthermore, it is

evident that the defendant never expected that the fuel would be so bricked, for two reasons: First, the defendant had never seen a brick made from lamp-black which contained less than ten per cent of moisture. The thousands of tons of bricks which it had theretofore used at the plaintiff's plant had all been made from a moist lamp-black and the moisture of the brick reduced to less than ten per cent. by sun drying or kiln drying the brick. Secondly, the defendant specifically placed its stamp of approval upon the 3000 tons of fuel which the gas company had accumulated in the fall of 1909 [Tr. 207], knowing at the time of said approval that this fuel had been made from moist lamp-black and thereafter dried to the required moisture content.

These facts show that the contention advanced by the defendant's chief engineer for the first time upon the witness stand in this trial is entitled to no weight, and cannot give any support to the findings of the trial court.

## 2. AS TO THIS FINDING BEING AGAINST LAW.

We have devoted our argument thus far chiefly to the proposition that assuming that all the conversations and correspondence between the parties prior to the date of the old contract of April, 1907, could properly be considered in evidence, and could be treated as part of the new written contract of July 12th, 1909 (although not expressed therein), even then the evidence does not support the finding that the lamp-black fuel furnished to the defendant was not of the quality agreed to be supplied. We pass now to the statement



of certain propositions of law which we believe, and respectfully assert, were disregarded by the trial court and which conclusively show reversible error in the finding that the lamp-black fuel furnished by the plaintiff during the final test was not in accordance with the contract.

(a) *The contract of April, 1907, was entirely abrogated by and merged in the contract in suit, and therefore the latter contract of July 12th, 1909, is the only contract between the parties.*

“Where the parties to a contract come to a fresh agreement of such a kind that the two cannot stand together, the effect of the second agreement is to rescind the first. This is one form of *novatio* in the Roman law.”

*Harrison v. Polar Star Lodge*, 116 Ill. 279.

To the same effect:

*Herboth v. American Radiator Co.*, 123 S. W. 533.

“A question frequently presented for decision is to what extent does the later contract abrogate the earlier contract. If the later contract expressly abrogates the earlier contract, it abrogates it *in toto* unless some restriction is made in the later contract, preventing such total abrogation. \* \* \* If the later contract between the parties covers the same subject-matter and has the same scope as the earlier contract, but is in whole or in part inconsistent therewith, the later contract abrogates the earlier contract *in toto* and is the only contract upon the subject between the parties.”

Page on Contracts, § 1340, p. 2076.

“A subsequent contract completely covering the same subject-matter, and made by the same parties, as an earlier agreement, but containing terms inconsistent with the former contract, so that the two cannot stand together, rescinds, supersedes, and is substituted for the earlier contract, and becomes the only agreement of the parties on the subject. Clark, Cont., 612; Patmore v. Colburn, 1 Crompt., M. & R. 65, 71; Chrisman v. Hodges, 75 Mo. 413, 415; Renard v. Sampson, 12 N. Y. 561, 568; Stow v. Russell, 36 Ill. 18, 30; Harrison v. Polar Star Lodge, 116 Ill. 279, 287, 5 N. E. 543, 546; Howard v. Railroad Co., 1 Gill 311, 341; Paul v. Meservey, 58 Me. 419, 421.”

*Housekeeper Pub. Co. v. Swift*, 97 Fed. 293.

(b) *Negotiations, representations or understandings, preceding and leading up to a former written contract, cannot be carried forward and deemed incorporated in a subsequent written contract covering the same subject-matter unless expressed therein.*

In *Texas Star Flour Mills Co. v. Moore*, 177 Fed. 751, the court said:

“I know of no recognized rule of law by which a “statement made respecting the quality of an article “offered for sale, where the offeree had declined to “accept the proposal, can be carried forward and at- “tached to a subsequent convention between the parties “evidenced in writing which does not mention such “former assurance as an integral part of the present “agreement. The law, I think, is to the contrary. Ben- “jamin on Sales, Sec. 610, succinctly states: “that antecedent representations made by the vendor

“ ‘as an inducement to the buyer, but not forming part  
“ ‘of the contract when concluded, are not warranties.’

“See, also, 1 *Lawson on Rights & Remedies, Sec.*  
“212; *Ashcom v. Smith, 2 Pen. & W. (Pa.)* 211, 21  
“*Am. Dec.* 437; *Iron Works v. U. S., 34 Ct. Cl.* 174.”

“In *Chrisman v. Hodges, 75 Mo.* 413, 415, this exact question was presented to the Supreme Court of Missouri by an attempt to show by oral testimony that it was not the intention of the parties by a subsequent inconsistent contract to substitute that agreement for an earlier one, and the court unanimously held that this would be to permit parol evidence to contradict the terms and to destroy the legal effect of the later written contract, and that such evidence could not be lawfully received. The only testimony which could establish the truth of the averments in this regard falls under the ban of the established rule so often announced and applied in this court, that ‘no representation, promise, or agreement made, or opinion expressed, in the previous parol negotiations as to the terms or legal effect of the resulting written agreement, can be permitted to prevail, either at law or in equity, over the plain provisions and just interpretation of the contract, in the absence of some artifice or fraud which concealed its terms and prevented the complainant from reading it.’ *Insurance Co. v. McMaster, 87 Fed.* 69-71, 30 C. C. A. 538-540; *Thompson v. Insurance Co., 104 U. S.* 252, 259; *Insurance Co. v. Henderson, 69 Fed.* 762, 766, 768, 16 C. C. A. 390, 393, 395, 32 U. S. App. 536, 543, 547; *Green v. Railway Co., 35 C. C. A.* 68, 92 Fed. 873, 877; *Laclede Fire-Brick Mfg. Co. v.*

*Hartford Steam-Boiler Inspection & Insurance Co.*, 60 Fed. 351, 353, 358, 9 C. C. A. 1, 3, 8, 19 U. S. App. 510, 513, 520; *Insurance Co. v. Mowry*, 96 U. S. 544, 547; *Assurance v. Kryder*, 5 Ind. App. 430, 435, 31 N. E. 851; *Union Nat. Bank of Oshkosh v. German Ins. Co.*, 18 C. C. A. 203, 71 Fed. 473; *Insurance Co. v. Teter*, 136 Ind. 672, 673, 676, 36 N. E. 283; *Burt Canal Co. v. Pennsylvania Coal Co.*, 8 Wall. 276, 290; *Insurance Co. v. Lyman*, 15 Wall. 664; *Pearson v. Carson*, 69 Mo. 550; *Insurance Co. v. Neiberger*, 74 Mo. 167; *Lewis v. Insurance Co.*, 39 Conn. 100."

*Housekeeper Pub. Co. v. Swift*, 97 Fed. 293.

In the case of *Shull v. Ostrander*, 63 Barbour 130, the action was for fraud or breach of warranty on the sale of a horse. The parties had exchanged horses. The defendant represented his horse to be six years old, and sound, except a bad cold, and good to draw. She was found not to be as represented, and that trade was given up, and the plaintiff took both horses, and gave his note to the defendant for \$100.00. No new representations were made when the last trade was completed, except the allegation of the defendant that the stiffness of the mare, complained of by the plaintiff, was from a cold, which she would get over in a few days. The jury, upon these facts, found a verdict for the plaintiff, for \$40, and the defendant appealed.

The court says:

"The first contract was fully executed by the delivery to each party of the property to which he was entitled under the contract, and a new and independent agreement entered into in reference to the same prop-

erty. If the plaintiff was now suing for breach of warranty on the first sale it is quite likely he would be entitled to recover, as there is but little question but that the defendant warranted his horse; nor but that such warranty was broken. But it is not claimed that this action was brought for breach of warranty, or fraud in the first sale or exchange. We must inquire, therefore, whether there was fraud or warranty in the second sale. The second sale was made at the defendant's house, after the plaintiff had taken back the horse he received of the defendant, and informed the defendant that he thought the mare was stiff. The defendant said he thought not; after driving her he said he thought she was a little stiff, caused from cold, but thought it would pass off in a few days. The new bargain was then made, and the plaintiff took with him both horses, and gave the defendant his note for \$100. Confining the negotiations of the parties to the time when the second bargain was made, there was nothing said by the defendant from which a warranty of the horse could be inferred, or an intention to warrant. The plaintiff's counsel, to get rid of this difficulty, insists that the defendant is liable for the representations made and the warranties given in the first sale, inasmuch as the plaintiff must be held to have made the second in view of, and in reference to, what had been said by the defendant on the first sale. That the second bargain was but a modification of the first, and not a new and independent agreement.

The second bargain was a new and distinct agreement whereby the first was rescinded, and new obli-

gations assumed by the parties wholly inconsistent with the first. The first was an exchange of horses, the second was a sale, by the defendant of his horse, after rescinding the first, for the sum of \$100.

The question now is, do the representations and warranties given on the first enter into and form a part of the second. If they do, the judgment is right, and should be affirmed; if not, it must be reversed. \* \* \*

“\* \* \* Can we say that the representations made with reference to an exchange of horses would have been made had the second bargain been the one under discussion? It seems to me not. When that bargain was concluded, the rights of the parties were fixed, and a new bargain, made in regard to the same property, must rest on its own facts and circumstances.” Judgment was therefore reversed.

In the case of *Byrd v. Campbell Printing Press and Manufacturing Co.*, 90 Ga. 542, the syllabus, which we quote, states briefly the proposition of law upon which we rely in this case.

“The plaintiff having made to the defendant a written offer to sell him a machine under full guarantee in certain designated respects, but in no others, and at a named price to be paid in specified installments, the writing providing that defendant might take the machine on three months’ trial before deciding whether or not he would accept it; and he, before the expiration of that time, having thoroughly tested the machine and pointed out to plaintiff’s agent its failure, in consequence of various defects he had discovered, to come up to the proposed guarantee, and having therefore de-

clined to purchase it on the terms proposed, but having afterwards, with a full knowledge of the machine and its defects, purchased it at the same price, without express warranty, upon a proposition made by himself and on terms in some respects more favorable to himself, giving his promissory notes in settlement, it is not a valid defense to an action thereon that there was a breach of the guarantee in the original offer to sell; or that in consequence thereof the consideration of the notes failed, totally or partially; or that the machine was not merchantable and reasonably suited to the use intended.”

So in our case, even if we assume that the construction company made its contract of April, 1907, to install a gas-making machine of a certain capacity, relying upon a representation or guarantee of the gas company concerning the quality of the fuel that would be furnished, nevertheless if the construction company, after the failure and abandonment of that contract, entered into a new contract which did not express such guarantee, it could not rely on a breach of the original guarantee as a defense.

*(c) Oral specifications, conditions, warranties or agreements made prior to, or at the same time as, a formal written contract, but not expressed therein, form no part of the contract between the parties and cannot be proved to vary or add to the written contract.*

“Written contract is presumed to contain the entire agreement of the parties, to the exclusion of previous conversations not incorporated into it.”

*Benjamin on Sales*, pp. 171, 208.

“If the article is sold by a formal written contract or a regular bill of sale, and that is silent on the subject of warranty, no oral warranty made at the same time, or previously even, can be shown.”

*Id.*, pp. 519, 625.

It is surely unnecessary to multiply the authorities that give judicial sanction to the established rule that all prior, and contemporaneous, oral negotiations and agreements between the same parties are presumed to have been merged in the final written contract, unless omitted therefrom by fraud, accident or mistake.

*Ellicott Mach. Co. v. U. S.*, 43 Ct. Cl. 469;

*Eisert v. Adelson*, 121 N. Y. S. 446;

*Illinois Life Ins. Co. v. Tully*, 174 Fed. 355;

The case of *Nounnan v. Sutter Co. Land Co.*, 81 Cal. 1, illustrates the rule we are now discussing. It was an action for damages for fraudulent representations, alleged to have been made by respondent, to induce appellants to enter into a contract to construct a levee on the lands of the former. The representations relied upon as fraudulent are stated in the complaint to be, that the defendant represented to the plaintiffs that he wished them to construct a certain levee upon the lands of the defendant, and represented to them that the amount of earth necessary to be placed upon said levee, in order to construct the same, was 350,000 cubic yards, and that the character of the earth along the line of the levee was light, sandy loam, and a good scraper material. That he dissuaded the plaintiffs from making an examination of the ground themselves, and



said that the plaintiffs could entirely rely upon the accuracy of the statements made. That the plaintiffs relied upon these representations and were induced thereby to abstain from making an examination. That these representations were untrue, the fact being that the cubic contents of the said levee was 500,000 cubic yards, and that the character of the earth, except very near the surface, was stiff adobe and hardpan, both of which are more difficult to move than light, sandy loam. That, as the work proceeded, it was at first of the character represented, but became harder as the work progressed, but the plaintiffs continued to believe that the quantity of the hard material would be but small. That finally the plaintiffs discovered that nearly all the earth necessary to be removed, in order to build the levee, was very stiff adobe and hardpan, and by reason of this discovery the plaintiffs quit work and abandoned and repudiated the contract, and demanded of defendant the reasonable value of the work done.

A demurrer to the complaint was sustained and the plaintiffs refusing to amend, judgment was rendered in favor of the defendant, and from this judgment the plaintiffs appealed. The Supreme Court, in discussing the case, says:

“It is evident from the contract itself that the plaintiffs did not regard either of these representations as material, and that they did not rely upon them. They could have protected themselves against both of the contingencies covered by the representations, in their contract. They were, by the terms of the agreement, to have a fixed sum per cubic yard for the work. There-

fore, the amount of earth necessary to be moved in order to complete the work was immaterial, except that they were required to have the same completed within a certain time, or forfeit a part of their compensation. They could easily have guarded against this by providing that, if the work overran the quantity named, a longer time should be allowed them. As to the representation that the material was of a kind that would be easily worked, they could have protected themselves by providing that for that class of work they should have twelve cents per cubic yard, and for more difficult or expensive material to handle, a greater sum. To have inserted such provisions in the contract would have been but an act of common prudence. If they had regarded these matters as material, and contracted with reference to them, they would no doubt have been inserted.

“Treating these as a part of the negotiations, leading up to and forming the basis of a contract, we must presume that the entire negotiations of the parties were included in the written contract as executed, and so presuming, we must hold that they were bound to move the earth contracted to be handled, and to do it within the time named, without reference to its quantity or quality. (Civil Code, Sec. 1625; *Pickering v. Dowson*, 4 Taunt. 779.)

“This was their contract. Treating them as mere representations, made to induce the making of a contract, the contract itself furnishes sufficient evidence of the fact that they were not relied upon, and were not regarded by the plaintiffs as material. Besides, so far

as both the quantity and quality of the material were concerned, the complaint shows a waiver on the part of the plaintiffs of the right to contest the contract on that ground. They did not stop work when they found the material to have been different from the kind represented, but kept right on with the work long after such discovery. Nor did they stop work when they had handled 350,000 cubic yards of earth. This shows that they must have been willing to handle the kind of material they found, and in a greater quantity than the defendant had represented would be necessary, at the price named in their contract. Having continued on after they must have known that the alleged representations were fraudulent, we must presume that they were willing to, and did, waive the fraud, with the hope, we suppose, of again finding a soft spot of earth. Having taken this risk and made the defendant liable for the work done, after they discovered the alleged fraud at the contract price, it was then too late to recover on the ground that such representations had been fraudulently made. (Citing cases.)

For these reasons the complaint was bad and the demurrer to it was properly sustained.”

*(d) The rule of merger of prior or contemporaneous oral negotiations and agreements applies also to prior written agreements or representations.*

These are merged in the subsequent written contract and if not expressed therein are deemed excluded.

The case of *Crandall et al. v. Rhodes et al.*, 20 Fed. Cas. p. 240, No. 11,556, was an action of *assumpsit*,

founded on a warranty that a vessel, called the Baltic, was built mostly of white oak timber. It appeared that, in July, 1851, negotiations for a sale of the vessel were had between the parties, through the agency of W. W. Brown, a ship broker. \* \* \* While the negotiations were going on, Brown wrote to the plaintiffs several letters, one of which contained a representation that the vessel was built mostly of white oak timber. \* \* \* On the 12th of July, 1851, the sale was agreed on, and the defendants signed a written memorandum which was as follows:

“Providence, July 12, 1851. We have sold to Randall & Stead, this day, through W. Whipple Brown, the bark Baltic, now at East Boston, for twelve thousand eight hundred dollars, to be paid next Tuesday, as follows: Twenty-five hundred dollars cash, their note, thirty days, interest added, for five thousand one hundred and fifty dollars, indorsed by Thomas J. Stead, of this city, and their note for five thousand one hundred and fifty dollars interest added, sixty days, indorsed by Thomas J. Stead. Full packages of beef, pork, bread, and flour are to be taken out by the owners, all other small stores belonging with the vessel.

(Signed) J. & P. RHODES.”

A corresponding paper, setting forth the purchase, was signed by the plaintiffs. The breach relied on was, that only a small part of the frame of the bark was found, on examination, to be white oak. The court, speaking by Curtis, J., said:

“There is no doubt that a representation, intended by the vendor as a warranty, and acted on as such by

the vendee, amounts in law to a warranty; and it is also well settled that such representation so operates, although made during the treaty for a sale, and some days before the sale was finally agreed upon, if it appear that it was not withdrawn, and the contract of sale did not exclude it from its terms. But the question now presented is, whether the representation relied on was not excluded from the contract of sale, so as to form no part thereof. It is not contained in the written memorandum, signed by the defendants. Now, the general rule is that, when negotiations have terminated in a written contract, the parties thereby tacitly affirm that such writing contains the whole contract, and no new terms are allowed to be added to it by extraneous evidence. But it is argued that this memorandum is not the written contract of sale; that it contains only a statement of the fact that a sale has been made, and a description of the thing sold, the price and terms of credit. But this is all that is necessary to make a complete contract of sale; and to assume that anything more existed, and allow it to be shown, would violate the rule above stated. It is true that, in *Bradford v. Manly*, 13 Mass. 139, and *Hastings v. Lovering*, 2 Pick. 214, it was held that a bill of parcels was not the contract of sale, it being intended as the court says, in the first of those cases, only as a receipt for the price, and not to show the terms of the bargain. But here the writing could not have been intended for a receipt, and must have been intended to set forth, what it does set forth, a contract of sale; and, if so, it

must be taken to embrace the whole contract, and consequently a warranty was not one of its terms.

“It is argued that the reference to Brown, contained in the contract, may be sufficient to incorporate into it the letters which he wrote in the course of his agency, and which led to the making of the contract. These letters might have been so referred to as to make their contents part of the contract; but to have this effect, the contract must show that such was the intention of the parties. This intention does not appear by the reference to Brown’s agency. The natural meaning of that reference is only that Brown was the agent through whom the contract of sale, shown by the writing, was negotiated. There is nothing to show that the parties agreed to make all he had done and said part of the contract.

“I am of opinion that the plaintiffs are not entitled to recover; and, unless they elect to become non-suit, the jury will be directed accordingly.”

This authority is peculiarly pertinent because of the fact that there was a reference in the contract to the fact that the sale was made through Brown, the agent who made the false representation complained of. But the court points out that the intention to adopt the acts of Brown and make them part of the contract is not expressed in the contract, and his representations, therefore, form no part of it. So in the case at bar, there is a reference in the contract in suit to the “economy of lamp-black fuel” mentioned in the former contract of April, 1907. But this reference is merely to the *quantity* of fuel to be used for each thousand feet

of gas produced. It is a reference to economy of operation. And if the former contract had contained specifications of *quality* of the lamp-black these would not have been adopted and incorporated in the new contract by such a reference. The parties acted in accordance with this principle of law and in the new contract of July, 1909, they inserted the only specification of quality of lamp-black fuel that was considered a part of their contract, viz.: "Lamp-black fuel, containing not more than ten (10%) per cent moisture." [Tr. p. 41.]

The case of *Wetherill v. Neilson*, 20 Penn. State 448, 59 Am. Dec. 741, was an action on promissory note made by Wetherill, plaintiff in error, and given in payment for a quantity of soda ash purchased from Neilson, defendant in error, plaintiff in the court below. At the trial Trimble, a merchandise broker, testified that he had negotiated the sale and that Neilson had represented to him that the soda ash was of forty-eight degrees strength, and that he so represented the article to the defendant. Testimony was offered to the effect that the soda ash in question was below forty-eight per cent and not merchantable, but this evidence was not admitted by the trial court and the defendant excepted. Verdict was rendered for plaintiff and the defendant brought error. The court said:

"There is no difference in principle between this case and the numerous ones referred to in the argument establishing the rule that the purchaser of the article takes the risk of the quality of the article purchased, unless it be warranted or he be fraudulently misled as

to it. If mere representations were to be treated as part of this contract, it is not easy to see why they should not be so as to all other contracts. And if they were, then the laws would foster a spirit of litigation by encouraging every man who is disappointed in the advantages expected from a bargain to drown his sorrows in the excitement of an action at law. The law repairs broken contracts, but it does not attempt to satisfy mere expectations. It is especially important that this should be the rule as to representations of the quality of goods sold, for there is nothing on which people are more apt to differ, and nothing on which they are less apt to trust each other.”

In this state it has been repeatedly held that a warranty of quality cannot be proved or availed of for the purpose of showing that a written contract was made with reference to an article or material of a particular quality unless the warranty or specification of quality is expressed in the contract. It is so held even when a sample is exhibited or delivered, and the contract might have been made in reliance upon it.

Thus, in the case of *Harrison v. McCormick*, 89 Cal. 327, an action for a balance alleged to be due on account of the sale of fifty tons of coal, under the name of Montana Lump Lehigh Hand-picked Coal, the answer set up, among other defenses, that the coal was sold by sample, and that the coal delivered did not correspond with the sample. The contract of sale was in writing and set forth the purchase of the quantity of coal stated, and the price and terms of payment. The defendants were permitted to show, by parol evidence,



that the contract was for coal of the same kind and quality as the defendants had previously bought from the plaintiff and which they were then using in their foundry, and that the coal delivered was not of the kind or quality therein referred to. The question presented on appeal was whether this parol evidence was properly admitted. On this point the court said:

“We do not see how the admission of this evidence can be sustained. Its effect was to show that coal was sold by sample, and thereby to import into the contract a warranty that the coal sold was to be equal to the sample. When the contract is in writing, and nothing in the written contract indicates that a sample was used or referred to, parol evidence cannot be allowed to show a sale by sample. (Tiedeman on Sales, Sec. 188; *Wiener v. Whipple*, 53 Wis. 298; *Thompson v. Libby*, 34 Maine 374.) \* \* \* The respondents further insist that this evidence was proper, because it tended to show that a fraud was practiced upon them in the making of the contract. This would be so, if such a defense had been made in the answer. The answer denies the execution of the contract alleged in the complaint, and avers that the contract of sale was by sample, but it contains no averment that defendants were induced to enter into the contract alleged in the complaint by any fraudulent representation, as that the coal described in such contract by name was the same kind and quality of coal previously bought by defendants from plaintiff, and without such averments, or an allegation of mistake in reducing the contract to writing, this evidence was irrelevant and immaterial.”

In our case there is no question but that the lamp-black furnished to the defendant was the material referred to in the contract—the court so finds. The adverse finding, by reason of which judgment was given against the plaintiff, was that the lamp-black was not equal to a sample which is not referred to in the contract.

In the case of *Gardiner v. McDonogh*, 147 Cal. 313, a contract had been made for the purchase of a quantity of beans. The beans were shipped by the seller to the buyer at San Francisco, and the purchaser refused to accept them on arrival because they were not equal to the sample which, it seems, had been given to the purchaser prior to the sale.

One of the points urged by the appellants was that the trial court erred in permitting the plaintiffs to show by parol evidence that there was a sale by sample.

“It is insisted,” says the court, “that the contract of sale on its face was complete and perfect; that its terms did not mention anything about a sale by sample, and that those terms could not be varied by parol evidence on this subject; that the admission of such evidence was in violation of the provisions of section 1856 of the Code of Civil Procedure, which declares, in effect, that when an agreement has been reduced to writing by the parties, it is to be conclusively deemed to contain all the terms agreed upon, and that no evidence of the agreement other than the writing can be given \* \* \*, and that the admission of such evidence in the case at bar was in direct conflict with the decision of this court in *Harrison v. McCormick*.”

“We are satisfied that the admission of this evidence for the purpose of showing that the sale was a sale by sample, cannot be sustained.”

This decision of the Supreme Court of the state of California is based upon a rule of evidence laid down by statute in this state (C. C. P. 1856), and decisions of the state court upon questions of this character are deemed binding upon the federal courts sitting in the state.

In the case of *Germain Fruit Co. v. Armsby Co.*, 153 Cal. 585, the Supreme Court of California distinguishes between the admissibility of parol evidence for the purpose of identifying the subject-matter of a written contract, and parol evidence intended to prove a warranty of quality not expressed in the contract. The contract involved in that case witnessed to the sale by the defendant to the plaintiff of twenty-five hundred boxes of apricots, described as lot “A,” lot “K,” lot “C” and lot “E,” at a price and on terms stated in the contract. On the question raised by the appeal, relating to the admissibility of parol evidence to affect the terms of this writing, the court said:

“The description of the property sold is admittedly incorrect. \* \* \* The contract calls for apricots, while the evidence shows, and both parties admitted, that *dried* apricots were the subject of the agreement. It is conceded that this defect of description may be supplied by parol. Respondent contends that the same rule warrants the introduction of parol evidence to determine what apricots were intended to be described by lot ‘A,’ lot ‘K,’ lot ‘C’ and lot ‘E,’ and also to identify

them by sample. There is no question as to the former proposition, and in a proper case and under proper circumstances the latter would no doubt be true. \* \* \* If the facts had been such as to make the evidence proper upon this theory alone, the purpose of its introduction should have been limited so as to exclude its consideration in connection with the question of warranty of quality. On the contrary, the very purpose of its introduction was apparently to add to the written contract of sale another term, a parol warranty of quality by sample. The court permitted the introduction of parol evidence as to sample, and applied it on the theory that it was competent proof of a warranty. It expressly found such warranty, and the judgment for damage rests upon its breach. \* \* \* The finding and judgment, therefore, rest on the parol evidence.

“It is urged by respondent in support of the court’s action, that an ambiguity or uncertainty appears in the language of the instrument by the use of the terms ‘lot A, 287 boxes,’ etc. The matter is open for explanation by parol evidence, and that such ambiguity or uncertainty may as well be removed by showing the term was intended to mean according to sample ‘A,’ as by showing that it was intended to mean some certain pile of 287 boxes. \* \* \*

“There is much weight in this contention. We must, however, bear in mind that the law permits no new term to be introduced into a written contract by parol, while it does permit such evidence for the purpose of making certain an ambiguous description, or for the purpose of identification. \* \* \* While from the

parol evidence introduced the inference may be drawn that the parties intended the sale should be on a warranty by sample, we cannot permit any bias or knowledge of the fact to lend weight to the construction of the instrument. Admitting that such was the intention, an examination of the writing shows that if this were the case, there was an entire failure to embody such intention in the contract. The language used was unfit and inappropriate to express a warranty of quality by sample or otherwise, being language importing description and identity only. \* \* \* Like the statute of frauds, this rule is founded upon long and convincing experience that written evidence is more certain and adequate than slippery memory. So long as the rule is applied, the actual contract made can be preserved without fear of its being affected in its terms by the frailties of an interested human recollection. That sometimes the written contract does not include all the terms intended by reason of neglect or oversight, and injustice is thereby done in particular cases, does not justify the abandonment of the rule. \* \* \* The admission of testimony to show a sale by sample for the purpose of establishing an express warranty of quality of the apricots sold, was error. The finding of such warranty was without competent evidence to sustain it, and the case was tried on an erroneous theory, inconsistent with the rule declared in *Gardiner v. McDonogh*, 147 Cal. 313."

For the reasons given and under the rules laid down in the foregoing decisions of the Supreme Court of this state, we respectfully insist that the finding of the trial

court in this case to the effect that the gas company undertook, agreed and warranted that the lamp-black fuel to be furnished should be of a certain quality of hardness and tensile strength not inferior to the sample briquette obtained by the construction company from the gas plant prior to the execution of the contract of April, 1907, was without competent evidence to sustain it; that this case was tried in the court below on an erroneous theory inconsistent with the rules of evidence established by the Code of Civil Procedure of this state and repeatedly declared by the Supreme Court of California.

The portion of section 1856 of the Code of Civil Procedure of the state of California, referred to in the foregoing decisions, reads as follows:

“When the terms of an agreement have been reduced to writing by the parties, it is to be considered as containing all those terms, and therefore there can be between the parties and their representatives, or successors in interest, no evidence of the terms of the agreement other than the contents of the writing, except in the following cases: \* \* \*”

We believe that this court will follow the decisions of the Supreme Court of this state in its construction of section 1856 of the Code of Civil Procedure and in its application of the rules of evidence announced in the three cases last cited. These decisions have established rules of property and conduct in this state upon which the parties to this action must be deemed to have relied when they made, in this state, a contract to be performed here.

The rules of evidence established by statutes of a state are followed by the courts of the United States when sitting in that state.

*Ryan v. Bindley*, 1 Wall. 66;

*M'Niel v. Holbrook*, 12 Pet. 84;

*Fitch v. Creighton*, 24 How. 159.

State decisions which have become rules of property and action in the state are always regarded by the federal courts as authoritative declarations of what the law is.

*Burgess v. Seligman*, 107 U. S. 20.

The interpretation of a state statute by the state courts with respect to its application to contracts of insurance issued by a foreign insurance company, is binding on the Supreme Court of the United States.

*New York Life Ins. Co. v. Cravens*, 178 U. S. 389.

## II.

**The court erred in failing to find that the apparatus did not have the minimum gas making capacity called for by the contract, and did not have the ability to made gas of the quality and with the fuel economy required by the contract.**

(1) APPARATUS FAILED TO REACH AN ESTABLISHED CAPACITY OF 2,000,000 CUBIC FEET OF GAS PER DAY.

We refer the court to article 3 of the contract of July 12, 1909, which provides as follows:

“3. And the party of the first part agrees that if

said party of the first part cannot, during said test, bring said apparatus to an established capacity as herein defined, of at least two million (2,000,000) cubic feet per twenty-four (24) hours, of the kind of gas specified in said contract, with the same economy of oil and lamp-black fuel containing not more than ten (10%) per cent of moisture mentioned in said contract, said party of the first part will remove at once without any cost to the party of the second part, said apparatus from the premises of the party of the second part, and repay to said party of the second part all money heretofore paid or advanced by said party of the second part to said party of the first part under said contract, to-wit: twenty-six thousand eight hundred twenty-three and 45/100 (\$26,823.45) dollars.”

The amount of lamp-black fuel from which the defendant agreed to produce 1000 cubic feet of gas was 35 pounds and the candle-power of the gas which the defendant agreed to produce was 20 candles. The actual result of the 20-day test from March 10th to March 30th, 1910, was as follows:

GAS MAKE.

March	10,	2,700,000	cubic	feet.
“	11,	2,422,000	“	“
“	12,	2,247,000	“	“
“	13,	1,936,000	“	“
“	14,	72,300	“	“
“	15,	No gas.		
“	16,	107,000	“	“
“	17,	2,039,000	“	“
“	18,	2,095,000	“	“



“	19,	2,028,000	“	“
“	20,	2,136,000	“	“
“	21,	2,171,000	“	“
“	22,	2,074,000	“	“
“	23,	2,008,000	“	“
“	24,	2,015,000	“	“
“	25,	1,956,000	“	“
“	26,	1,950,000	“	“
“	27,	1,824,000	“	“
“	28,	1,640,000	“	“
“	29,	1,290,000	“	“

making on an average during said final test of 1,735,565 cubic feet per day. [Tr. p. 347.] The average amount of fuel used by the defendant's apparatus during said test was 39.58 pounds per thousand feet of gas made as against 35 pounds specified in the contract [Tr. p. 347], and the candle-power of the gas produced was 19.1 as against a minimum of 20 candles required by the contract. [Tr. p. 348.]

This absolute failure on the part of the defendant's apparatus is ascribed solely by Mr. Pederson to the fact that the fuel furnished by the gas corporation did not have as great a tensile strength as the fuel would have had, had the bricks been made from a carbon containing less than ten per cent of moisture. We believe that we have shown that this contention of the defendant is unsound.

Since the court may enquire why the defendant's apparatus failed to live up to the minimum requirements of the contract, we direct the court to the testimony of the plaintiff's experts in the manufacture of

water-gas from lamp-black fuel, who were unanimous in their statement that the carburetor on the defendant's apparatus was too small in order to enable the apparatus to make the amount of gas guaranteed. [Tr. pp. 737, 699.] The defendant admits that during its final test of the apparatus, the machine made more gas than it ever had in its history of nearly three years at the gas corporation's plant. Mr. Pederson testified that the set had never theretofore even approached a make of 2,000,000 feet a day. [Tr. pp. 528, 565.] It is therefore evident that there was either some structural defect in the defendant's set, or else that it is a physical impossibility to manufacture a water-gas set which will produce the quantity of gas guaranteed by the defendant, with the fuel economies specified.

One reason assigned by defendant's witnesses for the failure of the apparatus was that a large amount of fine carbon was carried in the draft from the generator into the carburetor, thus choking the machine, and that this fine carbon came from the brittle and easily pulverized bricks.

When pressed on cross-examination as to what amount of gas the defendants were able to make in their apparatus when they were operating same in February of 1910, with fuel which the defendant claims was superior to the fuel furnished during the final test, Mr. White testified that the gas made was as follows [Tr. p. 565]:

Feb.	17,	1,704,000	cubic feet.
“	18,	1,751,000	“ “
“	19,	1,790,000	“ “

“	20,	1,872,000	“	“
“	21,	1,811,000	“	“
“	22,	1,540,000	“	“
“	23,	1,561,000	“	“
“	24,	1,500,000	“	“
“	25,	Shut down.		
“	26,	1,644,000	“	“
“	27,	1,532,000	“	“
“	28,	1,294,000	“	“

White had just previously informed the court that he thought with ideal fuel the machine had a capacity greater than 2,000,000 cubic feet. Trying to reconcile this testimony with the defendant's testimony as to what the machine actually did make in February when they claimed the fuel was satisfactory, White testified as follows in response to the following question by the court [Tr. p. 565]:

“Q. (By the Court): If the capacity of the generator or apparatus is such as you have testified, how is it that you account for not making a larger production for the amount of fuel that you consumed on this test?

A. We did not have enough air for this test, and prior to the final test, we added another 20-inch blast line, which gave us the increased efficiency.”

While the testimony concerning the amount of gas actually made by the defendant during the final test shows that apparently the increase of blast did increase the gas-making capacity of the machine, still the testimony of Mr. White, when viewed in connection with the testimony of Mr. Gouldlin, the president of the defendant company and the designer of all its apparatus,

shows that by increasing the blast Mr. White caused to exist the very condition which made the final test of the apparatus a failure and which condition the defendant has sought to claim was caused by a defective quality of lamp-black fuel supplied by the gas company.

The testimony of the plaintiff's gas operators who had had years of experience in the use of lamp-black fuel shows that in the use of this fuel a considerable breakage of the fuel occurs and that a large amount of fine particles of fuel are carried from the generator into the next portion of the apparatus known as the carburetor. The defendant had had two years experience in the use of this lamp-black fuel in its apparatus at the gas company's plant at the time the contract of 1909 was entered into. And in this connection we call the court's attention to the provision of said contract, as shown on page 40 of the transcript, which provides that the defendant would before commencing any test of said apparatus make certain changes in the apparatus, one of the three changes being to "provide ample means for the collection and easy removal of dust and fine carbon carried from the generator to the carburetor."

Mr. Gouldlin, the president of the defendant company, testified that in changing the apparatus according to the contract of July, 1909, instead of providing any especial apparatus for the collection and removal of this fine carbon, he had caused the generator to be enlarged, stating that he thereby increased what was known as the grate area, which means that the fuel placed in the generator was spread over a larger bed. The result of this, Mr. Gouldlin stated, was to mini-

mize the effect of the strong air blast which in the manufacture of gas in these sets is injected into the base of the generator so that the air is forced up through the fuel bed, supplying the oxygen necessary for a complete combustion of the fuel. [Tr. p. 622.] Mr. Gouldlin explained from an engineering standpoint that the fuel bed in the original set had been so small that the effect of this heavy air blast upon the fuel was to disintegrate the fuel and cause a large quantity of fine carbon to be carried over from the generator into the carburetor. By increasing the grate area, Mr. Gouldlin stated the air blast would be distributed over a larger area and would thus pass through the fuel with less force or velocity, the result being that less carbon would be carried over into the carburetor. At this point, we again call the court's attention to the fact that the defendant's sole claim as to the evil effect of the gas company's fuel being brittle, was that the bricks broke up when thrown into the generator (although they admit that the bricks were delivered at the defendant's set in a good condition) [Tr. p. 545], so that a large quantity of fine carbon went from the generator over into the carburetor, thus clogging the carburetor and destroying the gas-making efficiency of the apparatus.

Now, considering Mr. Gouldlin's testimony as to what he did, as heretofore set forth, to prevent this very same carbon from being forced from the generator into the carburetor, we find that the defendant's operator, Mr. White, at the last moment and just before the final test was commenced added a new blast

line to the defendant's generator and thus *doubled the amount of air blast* which was sent into the generator and up through the fuel. [Tr. 567.] Thus actually undoing and nullifying the work of Mr. Gouldlin, the designer of the set. We do not think it can be controverted but what this action on the part of the defendant's own operator, while it perhaps increased the gas-making efficiency of the machine for a few days, was the direct and only reason why the apparatus became clogged and failed to sustain even the minimum gas-making capacity required by the contract for the stipulated period of twenty consecutive days, and for the trial court to have placed the blame for the failure of this set upon the fuel supplied by the defendant was clearly a finding made in the absolute face of evidence which shows plainly that an engineering blunder of the defendant was the reason why the defendant's apparatus was a failure.

(2) THE APPARATUS FAILED TO PRODUCE, DURING THE FINAL TEST, GAS OF A CANDLE-POWER OF AT LEAST TWENTY CANDLES.

The court found that during the final test the gas company produced a gas of less than twenty candles. It was the contention of the defendant that the reason why they made a gas of less than twenty candles was that two of the gas company's employees, named Fargher and Robinson, had told them that the average candle-power that the gas company desired to produce was approximately nineteen candles [Tr. 461], and that Fargher asked the defendant to keep its machine in such a condition as to produce a gas not exceeding

nineteen candles. Mr. Fargher and Mr. Robinson deny that they ever made any such statement or request to the defendant and the evidence shows that neither Mr. Fargher or Mr. Robinson had absolutely any authority for making any such statement and no authority for permitting the defendant to deviate from the express terms of its contract, and the gas company's officials testified at the trial stated that they had no knowledge that any such statements or requests had ever been made to defendant as regards the candle-power, and the defendant does not claim that it had any higher authority for violating or deviating from this portion of its contract except the alleged unofficial statements of Mr. Fargher and Mr. Robinson. We submit that as a matter of law, the defendant cannot avail itself of this unauthorized statement attributed to an employee of the gas company. If a contracting party can be excused from the performance of its solemn contracts, by such loose procedure, a contract would be a useless factor in commercial life.

(3) THE APPARATUS FAILED DURING THE FINAL TEST TO PRODUCE GAS WITH THE CONSUMPTION OF NOT MORE THAN 35 POUNDS OF CARBON PER THOUSAND CUBIC FEET OF GAS MADE.

The evidence shows that the average carbon consumption during the final test was 39.58 pounds of carbon per thousand cubic feet of gas made, while the contract called for a consumption not exceeding 35 pounds. This excess consumption of carbon meant that the defendant's apparatus in producing 2,000,000

cubic feet a day would consume 20,000 pounds of carbon more than the contract requirements, which according to the value of the lamp-black bricks in the Los Angeles market at that time would have resulted in a loss of \$30 to \$40 a day to the gas company, which in a year's time would amount to approximately \$12,000 loss in fuel. The defendant was absolutely unable to offer any excuse for the failure of the machine to produce gas with the carbon fuel economies guaranteed. While the defendant introduced evidence through its operator, Mr. Pederson, to the effect that the apparatus could have made more than 2,000,000 cubic feet of gas per day if the fuel had had the tensile strength the defendant claimed the contract required it to have, the defendant, however, did not introduce one particle of evidence to the effect that the apparatus would have been able to have produced gas with a fuel consumption not in excess of 35 pounds, if the fuel had possessed a tensile strength as great as the defendant claimed it should have possessed. The defendant sought to obtain from its operator, Mr. White, an expert statement as to what the fuel consumption of the apparatus would have been had the fuel been ideal according to the defendant's notion, yet Mr. White stated that he was absolutely unable to state what fuel economies the machine could have attained.



III.

**The Court Erred in Finding that a Kiln Dried Brick was Not in Compliance with the Contract.**

The defendant, apparently realizing throughout the trial the weakness of their contention that the fuel furnished during the final test was defective because it was manufactured into brick form from a lamp-black containing more than ten (10%) per cent moisture, tried to shift the blame onto the process whereby the gas company reduced the moisture content of the bricks. We have shown, and the evidence is uncontroverted on this point, that in kiln-drying the bricks the gas company was doing the only thing which anyone could suggest might have been done to have reduced the bricks to the proper moisture content. The defendant saw the gas corporation kiln-drying the bricks for several weeks prior to the test and had never made any objection or complaint. [Tr. 509, 544.] The evidence shows that this was not the first time that the gas corporation had resorted to kiln-drying in order to get the bricks reduced to the desired moisture content, for it appears that the bricks which were used by the defendant in a test of its apparatus which was conducted in July, 1908, were bricks that had been kiln-dried. [Tr. p. 687.]

It is true that defendant's operators White and Pederson testified that in their opinion the kiln-drying of a brick destroyed its tensile strength, whereas sun-drying of the bricks did not. Their reasons given for this, as set forth in the transcript, pages 428 *et seq.* and 556, are not at all satisfactory or conclusive and

are not based upon any accurate data or experiment. [Tr. 580-581.] On the other hand, the gas corporation's operators who had had years of experience with bricks both sun-dried and kiln-dried, stated that there was absolutely no difference between them as to the tensile strength and that as a matter of fact a brick which was kiln-dried could not be distinguished from one which was sun-dried [Tr. 134], the gas corporation introducing the most conclusive evidence upon this point through the testimony of their chemist, Mr. Wade, who testified to having subjected both a sun-dried brick and a kiln-dried brick to the drop test prescribed by the United States Geological Survey for the determination of the tensile strength of such substances [Tr. 724 *et seq.*], and this test as described minutely on pages 724 and 725 of the transcript shows that as a matter of fact the kiln-dried bricks possess a greater tensile strength than do the bricks dried in the sun. The accuracy of this test was not disputed and no evidence was introduced by the defendant calling in question the conclusiveness of such a test or contradicting Wade's testimony upon this subject.

IV.

The court erred in incorporating into the written contract of July 12th, 1909, and treating as part thereof an alleged conversation reputed to have taken place between the defendant's agent, Mr. Pederson, and the Gas Company's representative, Mr. Luckenbach, in March, 1907, prior even to the execution of the first contract, dated April, 1907.

We submit as a matter of law, the defendant had no right to introduce any evidence as to any oral representation which may have been made as a part of a distinct and separate contract which was made and entered into at least two years prior to the contract in issue and which did not and cannot as a matter of law form any part of the contract of 1909. The defendant testifies that at the time the contract of 1907 was entered into it had little knowledge concerning the use of lamp-black as a fuel and that the contract of 1907 was entered into solely in reliance upon the representations made to them by the gas company. The evidence introduced in the trial fails to disclose any written representation on the part of the gas company to the effect that the fuel which should be furnished should possess any degree of hardness or tensile strength whatever, and the entire claim of the defendant is based upon the testimony of Mr. Pederson as to an oral conversation alleged to have taken place between Mr. Pederson and Mr. Luckenbach in *March*, 1907, which conversation Mr. Luckenbach denies ever took place. Mr. Pederson testified that at Mr. Luckenbach's instance he had gone to the gas plant and gotten a sample of lamp-black fuel in the form of a briquette, which

the evidence shows is cylindrical in form, about  $2\frac{1}{2}$  inches in length by  $1\frac{1}{2}$  inches in diameter, that after having procured this sample the following conversation took place between himself and Mr. Luckenbach [Tr. p. 407]:

“At that time we were getting pretty close to a contract, having talked over specifications and other matters pertaining to this work. Mr. Luckenbach emphatically wanted it understood that we should have a certain quality of fuel in making this contract and in getting results and I think he said, ‘We don’t want you to go and say afterwards that we promised you bricks such as you have seen down there and have obtained, but we are installing a bricking machine and that will be the form of the brick, but it will be the *quality* that you saw down there. It will be such fuel as that, but in a different shape,’ and says to have this absolute without any misunderstanding we had better write it down. I think he then wrote this letter to confirm his conversation with me.”

The letter to which Pederson there refers was a letter written by the gas company on March 5, 1907, and is set forth in full on pages 164 and 165 of the transcript, the part of the letter referring to the proposed fuel being as follows:

“In order that no misunderstanding may occur, the carbon to which we refer is a by-product from the manufacture of oil gas, with which you are undoubtedly familiar. The way we are handling this at present is, we feed it from the wash box by flume to the settling pits where the water is drained off and then the

carbon is either passed through a dryer or hauled into piles and sun-dried and then made into bricks or taken in large lumps from the pile and put into the generator.

"We are now negotiating for the purchase of a drier to handle all our product and *anticipate* that this drier will turn out our carbon with from five (5%) per cent to not to exceed ten (10%) per cent of moisture. After passing the drier, the same will be bricked for use in the generators."

It was the contention of the defendant, and the court's finding against the plaintiff regarding the fuel, was based entirely upon the contention that, in using the word "quality" in the conversation alleged to have occurred between Mr. Pederson and Mr. Luckenbach, Mr. Luckenbach meant that the fuel would have a tensile strength equal to that possessed by the small briquette sample which the defendant had obtained at the gas plant, although there is no testimony that Mr. Luckenbach ever even saw this sample. The plaintiff claims that, even if such a conversation ever did take place, which Mr. Luckenbach denies, that the word "quality" as used by Mr. Luckenbach referred solely to the chemical quality of the lamp-black, and this interpretation seems to be the only interpretation consistent with all of the correspondence and acts of the parties. Even the letter to which we have referred, that Mr. Pederson says was written in confirmation of this conversation, does not mention the fact that a sample has been furnished Mr. Pederson, nor does it use the word "quality" at all, and *makes absolutely no reference whatever to the tensile strength of the pro-*

*posed fuel.* In fact, the letter refers to a character of fuel which the gas company was not then making, but which it was in *contemplation* of producing, and there is no evidence in the case, nor do the defendants claim, that the gas company ever at any time after the execution of the contract of 1907 supplied the defendant with any fuel that did have a tensile strength anywhere approaching the tensile strength of this briquette sample, and there is no mention in any of the correspondence between the parties at any time, nor any evidence given in the trial, which shows that at any time between April, 1907, and March 18, 1910, at which time the defendant was in the middle of its final test, was the question of hardness or tensile strength ever mentioned between the parties.

The best method of ascertaining what is the proper construction to be placed upon a contract is to ascertain what the parties to a contract have done under the contract. If, as the defendant claims, the parties to the original contract of 1907 intended that the lamp-black bricks which were to be supplied the defendant were to have a tensile strength equal to the alleged tensile strength possessed by the sample briquette which defendant claims to have received from the gas company and if the tensile strength of the fuel was such a vital element, it is very strange that the evidence fails to disclose that at any time between April, 1907, and July 12, 1909, any complaint either written or oral was ever made by the defendant company that the lamp-black bricks furnished them did not possess the tensile strength to which they claim under the con-

tract they were entitled. All of the correspondence passing between the parties during this period is in evidence in this case and it is singular that the only complaint ever registered by the defendant concerning the fuel was that the lamp-black bricks furnished contained more than ten (10%) per cent of moisture [Tr. 179, 185-186]; and, as stated by Mr. Luckenbach, during the oral negotiations leading up to the execution of the contract of July, 1909, the only complaint made by the defendant concerning the fuel which had theretofore been furnished it was that the moisture content in the bricks was greater than ten (10%) per cent. The defendant does not deny this, neither does it claim that at any time prior to March 18, 1910, after the final test began, they ever complained about the tensile strength of the fuel, and the evidence fails to disclose at any time prior to that date any writing or conversation between the parties which had the slightest bearing upon the subject of the tensile strength or hardness of the proposed fuel.

In reviewing the correspondence that passed between the gas company and the defendant between April, 1907, and July, 1909, we find but two complaints were made concerning the fuel that had been furnished.

On December 16th, 1907, the defendant wrote the gas company as follows [Tr. p. 179]:

“Our water-gas plants are entirely beyond the experimental stage of water-gas plants, and in making the contract with you it was specifically stated that our guarantees were placed upon ‘dry lamp-black’ or lamp-black containing not more than 10 per cent of *moisture*.

The lamp-black briquettes furnished us at the time of this contract for our inspection were analyzed and found to contain an average of less than three per cent of *moisture*. Instead of the fuel which we had every reason to believe would be supplied, *and which was specifically mentioned in the terms of our contract*, we find that the fuel from which we are expected to make our guarantees good contains 35 per cent to more than 40 per cent by weight of *moisture*."

In a letter to the gas company dated June 7th, 1908, Mr. Pederson states that the defendant's fuel guarantees contained in the contract of April, 1907, were based upon Luckenback's letter of March 5th, 1907 [Tr. p. 164], and the sample of fuel furnished [Tr. p. 185], but no mention is made (and we think this is very significant) of the alleged oral guarantee upon the part of the gas company, upon which the defendant relied entirely during the trial. The letter then continues:

"From this you will see that we at no time contemplated to use MOIST LAMP-BLACK in the procuring of capacity, the guarantee applying to the use of *dry* lamp-black only in this respect."

In preparing for a test of the apparatus in June, 1908, Pederson wrote the following letter to the gas company [Tr. p. 190], which was in part as follows:

"We have made tests of the 14 tons of carbon which you have set aside for our use, and *find it contains less than 10 per cent of moisture*. We are making daily tests of such other carbon as you are supplying, and we



shall notify you if any of it is above 10 per cent *moisture.*”

The court will notice that throughout all the foregoing there is but one quality of the fuel that concerned the defendant—moisture. In the foregoing letter of December, 1907, the defendant says that the fuel they were to get was “specifically mentioned in the terms of the contract.” Yet we scan the contract in vain for any other term specifically mentioned than that of MOISTURE. Moisture was the only thing that ever concerned the defendant, and when they finally found themselves falling down in a test with fuel that was of the required dryness, they had to seek another excuse, and then for the first time complained of tensile strength.

The plaintiff’s evidence was to the effect that the bricks furnished the defendant during the final test of the apparatus in March, 1910, were equal to, if not superior, to that possessed by any bricks ever theretofore manufactured by them and supplied to the defendant. [Tr. 644, 694.] This statement the defendant does not deny in any particular except that the defendant’s witnesses testified that during one period, to-wit, in January and February of 1910, which is a period intervening between the time of the execution of the contract of July, 1909, and the final test of the apparatus, they received from the gas company some bricks which were superior in tensile strength to the bricks furnished them during the final test [Tr. 566, 527], but this statement in nowise contradicts the aforesaid testimony of the plaintiff that the bricks fur-

nished in the final test were equal to, if not superior, to bricks furnished at *all times prior to July 12th, 1909*. The defendant does not claim that it ever received in its operation under the contract of 1907 any lamp-black fuel of a tensile strength even approaching the tensile strength which they claim was possessed by the sample briquette handed to them in March, 1907. If, therefore, the parties to the contract of 1907 at no time during the operation under that contract used a fuel having a tensile strength equal to that which the defendant now claims the fuel should have possessed, and the record is barren of any complaint ever made by the defendant that the gas company violated the contract of 1907 at any time by reason of furnishing a fuel which did not have this claimed tensile strength, we feel that the court is, as a matter of law, bound either to hold that under this state of facts the parties were not obliged under the contract of 1907 to supply a lamp-black fuel of the tensile strength equal to the sample briquette, or the court must hold as a matter of law that since such fuel was not furnished at any time during the operation under the contract of 1907, a provision cannot be read into the contract of 1909 requiring the gas company to supply a quality of fuel having a tensile strength equal to that possessed by the sample briquette obtained by the defendant in March, 1907. *If the parties did not require such fuel to be furnished under the contract of 1907, how can it be held that they expected that it would be furnished under the contract of 1909, in the absence of any express provision to that effect?*

V.

The court erred in finding that from the 10th to the 30th of March, 1910, the apparatus did not have such a twenty day consecutive test as provided for in the contract of July 12, 1909.

(1) THE COMMENCEMENT OF THE TEST.

As heretofore stated, the defendant after the execution of the contract of July, 1909, made a preliminary test in August, 1909, in order to ascertain what changes it desired to make in the apparatus preparatory to the final test, and we hereby call the court's attention to the fact that during these preliminary tests the fuel furnished the defendant was a portion of the same batch of fuel which the gas company thereafter kept on hand and supplied to the defendant during the final test. [Tr. p. 687.] In referring to this preliminary test, the president of the defendant company in a letter to the gas corporation dated September 18, 1909 [plaintiff's exhibit No. 13, Tr. p. 204], stated as follows:

"The last experimental operation under Mr. Peder-son's direct supervision was of the utmost importance to us, definitely settling several features of which we were not entirely satisfied before, as to general results. It has been a long drawn out battle, but in conclusion assure you that I am now more than ever convinced of ultimate success, and I am extremely anxious that this shall be reached with the least possible delay."

The evidence shows that after the changes were made in the apparatus, the defendant's operator, White,

arrived upon the scene and took charge of the set and in some preliminary experimental work which Mr. White did with the machine, he used lamp-black bricks which contained more than ten (10%) per cent of moisture and so pleased was Mr. White with the moist bricks that on December 13, 1909, he caused the following letter to be written to the gas corporation [plaintiff's exhibit No. 14, Tr. p. 207]:

“Los Angeles, Cal., December 13, 1909.  
Los Angeles Gas and Electric Corporation, 645 So.  
Hill Street, City.

Gentlemen: We would prefer, if agreeable to you, that you furnish us the fuel bricks for the new machine which we have installed, containing say from 16 per cent to 25 per cent moisture, instead of 10 per cent, as formerly, *similar to the fuel bricks you are now using in your machine.* (Our italics.)

Yours very truly,

THE WESTERN GAS CONSTRUCTION COMPANY.

By E. C. WHITE.”

A few days later, the defendant's chief operator, Mr. Pederson, having arrived upon the scene, the defendant caused the following letter to be sent to the gas corporation, dated December 28, 1909 [plaintiff's exhibit No. 15, Tr. p. 207], revoking its letter of the 13th:

“Los Angeles, Cal., December 28th, 1909.  
Mr. C. A. Luckenbach, Manager of Construction, Los  
Angeles Gas and Electric Corporation, Los Ang-  
eles, Cal.

Dear Sir: In confirmation of our conversation this morning, I beg to state that we desire to withdraw our

letter of December 13th in reference to fuel to be used during the test of the water-gas apparatus now being installed by us. *The fuel that you have on hand at present will be satisfactory* (our italics), but we feel that it must be protected from additional moisture, and would ask that you protect the fuel that you have ready for us from rain and other moisture that may be precipitated upon it.

Yours respectfully,

THE WESTERN GAS CONSTRUCTION COMPANY.

By B. S. PEDERSON, *Agt.*”

The gas corporation is therefore officially notified that the defendant company will strictly require a fuel containing less than ten (10%) per cent of moisture, and the defendant placed its stamp of approval and acceptance upon the 3000 tons of bricks which the gas corporation at that time had accumulated for the purpose of the final test. The gas corporation, in pursuance of the defendant's request, covered this fuel so as to protect it from future rains and preserved it intact for the final test, at which time it was supplied to the defendant. We find the defendant in January and again in February operated its apparatus for a number of days making no complaint whatever concerning the fuel furnished, although the machine at no time produced anywhere near the minimum quantity of gas called for under the contract. On February 28, 1910, Mr. White caused the following letter to be written to the gas company [plaintiff's exhibit No. 16-B, Tr. p. 210]:

“Los Angeles, Cal., February 28, 1910.

Los Angeles Gas and Electric Corporation, Los Angeles, California.

Dear Sirs:

Attention, Mr. Luckenbach.

Further in reference to your letter to me of February 25th, I would beg to state that the chief engineer at the gas works raised the speed of the engine this morning, and increased the pressure to a satisfactory degree. It was my intention to go on with the test tomorrow morning, but we find that the carburetter has a coating over the top of it which it is essential to remove in order to get efficiency. Since perforating the back of the shoots, we get a large amount of fine stuff out before it reaches the mouthpiece of the generator. This condition has materially increased the efficiency of the fire, and for the two days operating since perforating the shoots the fire has built up.

Our company is desirous of having Mr. Pederson here during the test, but unfortunate he is north. He will be back on the 8th, and I ask you to give us until the 10th of March to start the test, promising you that we will positively start on that date, and that if Mr. Pederson returns earlier we will start before that date. Can notify him at once.

I trust that you will grant us this favor, and awaiting your reply, I am,

Yours very truly,

E. C. WHITE,

For Western Gas Construction Co.”

The gas corporation acceded to Mr. White's request for a day's delay and on the same day Mr. White officially notified the gas corporation in writing that the final test of the apparatus would commence on the morning of March 10, 1910, said letter being as follows (plaintiff's exhibit No. 16-A, Tr. p. 210]:

“Los Angeles, Cal., February 28, 1910.

Los Angeles Gas and Electric Corporation, Los Angeles, California.

Gentlemen:

Attention, Mr. Luckenbach.

Further, in reference to your letter of February 25th and mine of even date herewith:

We hereby notify you that we will, on the morning of March 10th, 1910, at 6 o'clock a. m., begin the final twenty-day test of the water-gas set now at your plant, as provided for in the contract between your company and the Western Gas Construction Company, dated July 12th, 1909. Between this date and the morning of March 10th, 1910, we will not require carbon of any specific amount of moisture, but in operating the set will use the ordinary run of brick.

Yours respectfully,

E. C. WHITE,

For Western Gas Construction Company.”

Although the defendant's agent, Mr. Pederson, tried to make the court believe during his testimony that the defendant was forced into the commencement of this final test and that the machine was not ready to commence the test at that time, Mr. White, who had charge of the machine and was the only representative of the

defendant who was present at the time the final test was commenced, stated that when he commenced the test on the morning of March 10, 1910, he considered the machine was in perfect condition for the commencement of the test, but that after the machine became stopped up during the test, he came to the conclusion that he had made an error in judgment. [Tr. p. 535.]

The defendant during the trial attempted to lay considerable stress on the point that the gas corporation rushed them into the final test at a time when the machine was not in a perfect condition ready for such a final test. But we call the court's attention to the fact that this apparatus had been installed at the gas corporation's plant since the fall of 1907 and that at that time the defendant company had received from the gas company practically three-fourths of the entire purchase price of the machine, and we submit that it is no wonder that the gas corporation in the spring of 1910, after a period of more than three years had elapsed, should have been rather impatient with the defendant for not commencing the final test of the apparatus. We call the court's attention further to the fact that under the written contract of April, 1907, the defendant agreed to construct the entire apparatus, ship it to Los Angeles from Indiana, install it here and have the apparatus in full working condition by the first of October, 1907, a period of six months. The contract of July, 1909, only provided for a few changes to be made in the apparatus, and yet we find that by the end of February, 1910, or in other words eight months after this contract was entered into, the defendant was



still tinkering with its apparatus and apparently no final test was even in sight. Faced with this condition of affairs, the gas corporation demanded that the defendant cease its endless delay and commence a final test of the apparatus. When this ultimatum was delivered by the gas corporation, the defendant sets its date for commencement of the final test as March 10th and its operator, Mr. White, states that on the morning of March 10, 1910, he felt that the machine was in perfect condition and he stated that the fires in his generator were in fine shape. [Tr. p. 569.]

(2) THE CONTINUANCE OF THE TEST.

On the first day of the test the machine made a large quantity of gas, but each day thereafter saw a decline in make until Mr. White concluded on the 15th day of March that by shutting down the machine for two days and thoroughly cleaning out the same, he could make more gas during the remaining days of the test, notwithstanding the loss of two days, than he could if he continued the operation of the machine without the shutting down and recleaning of the same. [Tr. pp. 573, 537.] The machine was accordingly shut down for two days, during which time the defendant relined the carburetor with new bricks. [Tr. p. 435.] On the 17th of March, the machine was again placed in operation and at 6 a. m. on the 30th of March, 1910, the defendant voluntarily and of its own accord ceased the operation of the machine. [Tr. pp. 557, 573.]

The defendant at the trial of the case attempted by two methods to escape the consequences of its ap-

paratus having made considerably less than 2,000,000 cubic feet per day during the test. The first method was by claiming that the defendant should be permitted under a custom which the defendant alleges was in vogue at the gas corporation's plant, to shut down the apparatus one day in seven for the purpose of cleaning out, the defendant's idea being that if it could persuade the court that it should be allowed these three days, that then the defendant could minimize the effect of their having lost three days during the test by reason of their shutting down and thus materially increase the average output of their machine. Uncontradicted evidence shows that this alleged custom of shutting down one day in seven (although the gas company's witnesses claimed that their custom was only to shut down one-half day in seven) [Tr. p. 704] was a custom which the defendant was not aware of at the time the contract of July, 1909, was entered into. And the undisputed evidence shows that the first time the defendant ever even suggested to the gas corporation that they were entitled to shut down the apparatus one day in seven was early in 1910 [Tr. p. 419], and the findings are and defendants admit [419] that when this matter was broached to the gas corporation, it absolutely refused to allow the defendant to break the continuity of the test. The contract of 1909 specifically states that the capacity of the apparatus is to be determined by a 20-day consecutive test. In other words, the gas corporation wanted to be sure that the defendant's apparatus would have a sustained capacity for at least 20 consecutive days. The evidence regarding the

gas corporation's custom of shutting down the apparatus from one-half a day to one day in seven, showed that it was a custom used in connection with apparatus which is kept in operation year in and year out [Tr. pp. 703-704], and the evidence shows that although this custom is followed by the gas corporation, yet in arriving at, or computing the gas-making capacity of their own apparatus, the period during which they are shut down each week is considered as a portion of the operating period. [Tr. p. 703.] The defendant admits that it never heard of this custom of shutting down once a week in any other plant in the United States [Tr. pp. 418, 491], and, since it did not know of this custom at the time the contract of 1909 was entered into, how can such a custom be read into this contract as a matter of law? The contract of July, 1909, specifically requires a "20 consecutive days' test" to be made, and since the gas corporation at all times refused to acknowledge that the defendant had a right to shut down the apparatus one day in seven, how could the court *as a matter of law* hold that the defendant was entitled to shut down its apparatus one day in seven? While the trial court in its findings did hold that such a custom was in vogue at the gas corporation's plant and that the shutting down of the plant one day in seven was a proper and usual practice, the court does not find that the defendant was entitled to shut down their apparatus one day in seven during such a final test as was required under the contract of 1909. Even if the court had so found, the only effect of the finding would be to raise the gas-making aver-

age of the defendant's apparatus during the final 20-day test to barely 2,000,000 cubic feet per day, but the defendant would still be left in the position of having failed to make gas using no more than 35 pounds of carbon and of having failed to produce a gas of at least 20 candles in quality, either of which failures are sufficient to require a judgment for the plaintiff.

(3) THE COMPLETION OF THE TEST.

After having voluntarily ceased the operation of its apparatus on March 30, 1910, the defendant's representative called at the gas corporation's plant and asked permission to make a further and additional test of said apparatus and stated that if the gas corporation would either accept the apparatus in its present condition or would grant the construction company the opportunity to make another test, that the latter would then repair the apparatus (which was at the completion of the test in such a delapidated condition that an expenditure of approximately \$1000 would have been required to even enable the machine to continue making gas) [Tr. pp. 368-370] and go on with its testing, but the defendant did not at this time claim that its 20-day test of which it gave the gas corporation notice on February 28, 1910, had not been fully completed.

This 20-day test, having been carried out from the 10th to the 30th of March, 1910, without objection, must be admitted to have been binding upon the defendant.

The finding of the court to the effect that a 20-day test of the apparatus such as was contemplated by the

contract of 1909 was not had, though worded in a manner which might be misunderstood, can have no other meaning except that such a test was not had because during the period from March 10th to March 30th, 1910, the gas corporation had not furnished the defendant with the quality of fuel required by the contract. The finding referred to cannot be construed to mean, and the evidence does not bear out the construction which the defendant may seek to make, namely, that the court meant that the machine had not been operated for 20 consecutive days. While the defendant claims that it should be entitled as a matter of custom to a credit of one day in seven for shutting down, they admit that they did not follow this custom [Tr. p. 418] and did not shut down one day in seven, and they do not claim that the three days during which they did shut down during the final test was such a shut-down as was customary in the operation of the gas company's plant. It is evident that defendant did not itself take a firm or certain stand on this proposition.

### **Conclusion.**

In our specifications of error we have taken exception to a large number of findings; but we have not attempted to consider each of them in detail in our argument, because all of the adverse findings are based upon the finding concerning the fuel, and if the trial court was wrong in its finding concerning the fuel, we submit that the entire judgment must be reversed. We believe that we have shown that the plaintiff in every respect fully performed the contract upon its part, and

that the defendant failed to make its apparatus produce the minimum amount of gas of the quality or with the fuel economies specified. We believe that the adverse findings of the trial court were based upon a false premise, both in law and in fact, and that plaintiff was entitled to a judgment as prayed for.

Respectfully submitted,

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No. 2159.

United States  
**Circuit Court of Appeals**

FOR THE NINTH CIRCUIT.

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Los Angeles Gas and Electric Com-  
 pany, a corporation,

*Plaintiff in Error,*  
*vs.*

The Western Gas Construction  
 Company, a corporation,

*Defendant in Error.*

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**BRIEF FOR DEFENDANT.**

This is an action brought by the Los Angeles Gas and Electric Company, (herein designated the Gas Company), against The Western Gas Construction Company, (referred to as the Construction Company) to recover the sum of \$26,823.45, fixed as a penalty for the alleged breach of certain warranties of capacity in a contract for the construction of what is known as an extended carburetter superheater water gas apparatus, together also with the expense of moving the apparatus from its premises. The Gas Company is a corporation

engaged in the extensive manufacture and distribution of illuminating gas in the city of Los Angeles and vicinity. The Construction Company is a manufacturer of gas generating machines with its factory and principal place of business at Fort Wayne, Indiana.

On the 8th of April, 1907, The Construction Company and The Gas Company entered into a contract whereby the Construction Company agreed to sell and the Gas Company agreed to purchase, the gas apparatus herein described, for a purchase price of \$35,694.00, payable in various installments as the work progressed. The contract contained a limitation of five months time from the date of the contract within which to complete the construction of the apparatus. It was agreed on the part of the Construction Company, that the machine should have a capacity of from 2,750,000 to 3,000,000 cubic feet per day of twenty-four hours, using dry lamp black with an economy of not more than 32 pounds of dry lamp black per 1000 cubic feet of gas made, or 35 pounds of lamp black containing not more than 10% moisture per 1000 cubic feet. The Construction Company also guaranteed that in making such gas, not more than  $4\frac{1}{2}$  gallons of crude oil of 17 degrees Baume, or over, should be used per 1000 cubic feet, of gas, and also guaranteed to make a good commercial gas, well fixed and non-condensable, of from 20 to 22 candle power, at the above rate per day. Elaborate specifications for the construction of the different parts of the apparatus were embodied in the contract and the same are set forth in full, in the complaint in the action, and will be found in the record, at pages 9 to 33.



The Construction Company proceeded with the work of installing the apparatus, but considerable delay ensued, due, as the Construction Company claims, to the fault of the Gas Company, and as the Gas Company claims, to the fault of the Construction Company. On account of this delay, the machine was not completed and ready for operation until the early part of 1908, and after the same was put in operation, the Gas Company refused to accept it upon the grounds that it had not the capacity and efficiency prescribed in the guarantees. On the other hand, the Construction Company claimed that it had fully performed the contract, and contended that the apparatus was fully capable of generating and manufacturing the quantity and quality of gas provided for, and with the economy of fuel and oil specified in the guarantee.

In the meantime progress payments had been made by the Gas Company to the Construction Company, to the amount of \$26,823.45 and when this controversy arose, with respect to the capacity of the apparatus, the Gas Company brought suit against the Construction Company for the rescission of the contract and the recovery of the moneys it had paid. The Construction Company filed a cross-complaint for the recovery of the balance due upon the contract, and the litigation was pending many months, but was never brought to trial. In the month of July of 1909, negotiations were opened between the parties for a settlement of the controversy, and on the 12th of July, of 1909, a supplement to the original contract was entered into between the parties by way of compromise, whereby it was agreed that the

Construction Company should be given an opportunity to make a preliminary test of the apparatus for the purpose of determining what changes it desired to make in the same in order to put it in a proper condition for a final test, and among the changes which it agreed to make, was the construction of a new generator, or generators; also providing means for the collection and removal of dust and fine carbon, carried from the generator to the carburetter, and providing ample and satisfactory means for scrubbing and condensing the gas. After these preliminary tests and the changes in the apparatus were made, the apparatus was to be subjected to a twenty consecutive days' test, for the purpose of determining its capacity. If it showed a capacity of 2,000,000 cubic feet per twenty-four hours, with the same economy of oil and lamp black as provided in the original contract, the purchase price was to be \$26,000.00. If it showed a capacity of 2,750,000 cubic feet per day, defendant was to receive the original purchase price of \$35,694.00, and if it developed a capacity ranging between those figures, a proportionate sum, based upon the prices mentioned. This contract is also set forth in the complaint and will be found on pages 39 to 43.

A few weeks after the contract was made, the Construction Company started the preliminary test for the purpose of determining what changes to make, completing those tests sometime in the middle of August. Thereupon it shut down the apparatus and proceeded to make the changes. A new generator was constructed and various other extensive changes made, at an expense of over \$8000, but it was not until the early part of 1910,

that the apparatus was in condition to be operated, preparatory to the test. Some delays then resulted from two explosions that took place upon the premises and interfered with operations, causing some damage to the apparatus and considerable delay. In the latter part of February, however, it was insisted on the part of the Gas Company that the test should be started on the 1st of March, 1910, but the Construction Company insisted that it was not ready, and requested additional time for balancing the machine and getting one of its expert operators upon the ground. The Gas Company consented to an extension of 10 days, only on condition that no further extension should be requested and that the final test should commence on the 10th of March. The Gas Company was, of course, in a position to enforce this ultimatum, for the reason that it controlled the supply of fuel, the operators and the premises, and accordingly, notwithstanding the fact that the apparatus was not ready, the test was begun on the morning of the 10th of March, 1910, at 6:00 a. m. The first day the apparatus produced more than 2,700,000 cubic feet of gas, although the fuel consumption was in excess of 35 pounds of lamp black per 1000 cubic feet. The second and third days considerably more than 2,000,000 cubic feet of gas was made, but the fourth day the make dropped below 2,000,000 cubic feet. It being manifest from this rapid decrease in production that something was radically wrong with the machine, it was closed down on the 14th and the discovery made that the carburetter had become almost entirely clogged by a deposit of fine carbon or lamp black, which blew over from the

generator into the carburetter. It took three days to clear this condition and then on the seventeenth, when operations were renewed, the condition of the fuel furnished for use in the generator was so decidedly impracticable for use (as we shall hereafter show), that the make on that day was only a little in excess of 2,000,000 cubic feet. On the succeeding seven days, the apparatus maintained a production of more than 2,000,000 cubic feet per day, but the carburetter again became clogged, as a result of the impossible condition of the fuel, (as we shall presently show), and the production decreased rapidly until, on the last day of the test only 1,280,000 feet were made. (See findings, XII to XVII, pages 779-785.)

At the expiration of twenty days from the time the test started, to wit: on the 30th day of March, the Gas Company refused to permit the apparatus to be any longer operated, declaring that it had failed to fulfill the guarantee and demanded the return of the \$26,823.45. The Construction Company took the position that there had been a substantial performance of the guarantees, notwithstanding the impossible conditions under which they had operated; that the result of the test had shown that the apparatus had a much larger capacity than 2,000,000 cubic feet per day; but that the conditions under which they had operated and particularly the unfit character of the fuel furnished, had rendered a practical demonstration of what the apparatus was capable of doing, utterly impossible. Defendant offered to proceed with another run under favorable and proper conditions, and abide by the result, but the Gas Company absolutely

refused to accede to the request, or permit any further demonstration whatever. Thereupon this suit was brought and the issues tried before His Honor, Judge Olin Wellborn, without a jury.

The case turned upon the issues raised by the pleadings, as to whether or not the fuel supplied by the Gas Company conformed to that which the Construction Company had contracted to use in the apparatus. On the part of the Gas Company, it was claimed, first, that they were not bound by the contract to furnish the lamp black in any particular form, so long as it contained less than 10% moisture; and secondly, that even if it were required to furnish the material in the form of substantial bricks suitable for consumption in the generator, that they did in fact comply with the requirements by furnishing the material in the form of bricks, containing less than 10% moisture, and as substantially and compactly bricked as reasonable skill and care would permit.

On the other hand, it was the position of the defense, that by the terms of the contract, read in the light of all the surrounding circumstances, it was contemplated that this material should be used in the generator, only after it had been dried to a moisture content of less than 10%, and then substantially bricked, so that its consistency would be such as to insure its reaching the generator in reasonably good shape; that as a matter of fact the fuel that was supplied during this test, had been utterly ruined, so far as the stability of the bricks was concerned, by the application of external heat for the purpose of driving out the moisture after bricking the material; that this course was pursued notwithstanding the

protests of the operators of the Construction Company throughout the test, and the result was that the bricks crumbled and pulverized to such an enormous extent, that it was utterly impossible to maintain the fires in such a condition as to produce anything like the quantity of gas, which the apparatus, under normal conditions was capable of producing.

The learned judge of the lower court adopted our view of the construction of the contract in this regard, and indeed it was practically conceded at the trial that that was the proper construction of the contract, and after hearing the testimony of many witnesses on the question of the character of the fuel and the condition in which it was furnished, found as a fact from all of the conflicting testimony in the record on the subject, that the bricks in the form in which they were furnished, were lacking in stability to such an extent as prevented the possibility of any such test as was contemplated by the parties and provided for in the contract. It necessarily followed from this, of course, that there had been no test and consequently that plaintiff was not entitled to recover the penalty fixed by the contract. It followed also, that in the absence of such a test as the contract required, the real capacity of the apparatus was not ascertained, and the court concluded that the defendant was not entitled to recover on the cross-complaint, and therefore that neither party take anything against the other. We propose to show that the findings of the court upon this vital issue of fact, as to the condition of the fuel, and whether there was such a test as was called for by the contract, are amply supported by the

evidence; but before adverting to the testimony upon which we rely to support those findings, we think it will be first profitable to call attention to the terms of the contract and to the conditions under which it was made and the objects to be accomplished, in order that the true meaning of the contract may be fully understood.

**Under the contract of July 12, 1909, the Gas Company was obligated to co-operate with defendant in providing proper conditions under which the final test should be made, and especially to provide the lamp-black fuel bricked in a manner practicable for use in the generator.**

Lamp black according to the proper dictionary meaning of the term is chemically pure carbon.

According to the literal interpretation of the contract, therefore, the Gas Company had no right to furnish any other material for fuel purposes than chemically pure carbon in the form of lamp black. The lamp black, however, which was produced at the Gas Company's plant, and furnished throughout this test was not chemically pure lamp black. It is a biproduct of their oil gas generating machines, and contains anywhere from ten to fifteen per cent of tar or other hydro carbon impurities, and a similar percentage of noncombustible ash, and which substances substantially diminish the gas making efficiency of the fuel. (Finding 16, page 781, 782.)

According to the strict letter of the contract, therefore, the Gas Company had no right to furnish this biproduct of their oil gas manufacture as a substitute for chemically pure carbon in the form of lamp black, but the Gas Company at the trial offered in evidence the

correspondence which took place between the parties during their negotiations for the contract to prove that the parties had in mind this byproduct of the oil gas generators when they used the term lamp black. Testimony was also offered that lamp black is the term customarily used among persons in the gas trade to designate the by-product of the oil gas machines. From this evidence the court found, (and properly no doubt), that the term lamp black as used in the contract had reference to the material which commonly passed by that name in gas plants and which was being produced at this plant, and not chemically pure carbon.

We have no criticism to make of that finding nor of that interpretation of the term as used in the contract, but we also earnestly contend, and the court has so found, that the term lamp black fuel as used in the contract should also be interpreted to mean material of that character bricked in a form suitable for use.

Read in the light of the circumstances surrounding the parties and of the correspondence offered by plaintiffs for the sole purpose of explaining the meaning of the term "lamp black," we are confident that no other conclusion can be reached than that reached by the court below, that is, that the parties intended that this lamp black material should be furnished to the construction company during the test after it had been reduced to a moisture of ten per cent, and then compressed in the form of substantial bricks which would hold their shape in the fire bed to at least the extent of preventing packing and smothering of the fire.

A general understanding of the process of the manu-



facturing of water gas would make it manifest that any other construction would reduce this contract to an absurdity. Water gas is produced by bringing water in the form of steam in contact with a mass of carbon heated to a very high temperature. When this takes place the water is decomposed into its constituent elements of oxygen and hydrogen. The oxygen combines with the carbon in the proportion of one atom of carbon to one of oxygen and forms carbon monoxide gas (CO). This carbon monoxide gas mixed with the hydrogen of the water which is liberated in the form of gas is what is known as water gas. The apparatus which comprised the water gas set covered by this contract consists of five different units, the generator, the carburetter, the superheater, the condenser and the scrubber. The generator described in the original specifications was cylindrical in form, thirteen feet in diameter and twenty feet high. The generator constructed under the supplemental contract of July 12, 1909, was oval shaped, thirteen feet in diameter at the narrowest place, twenty feet across the longest section, and twenty feet high. It was however, divided into two compartments making practically what is called in the testimony "twin" generators. In the bottom of the generator are what are known as the "grate bars" which correspond to an ordinary grate in an open fire. It is in this shell that the fuel is ignited and brought to an intense heat. The heat is maintained by the introduction of air under pressure during what is known as the "blast period." When the machine is in normal operation the blast continues for about six minutes, and then the generator is closed, and steam is

sprayed into this incandescent mass of carbon, and is converted into water gas. This is called the "make" period, and also continues for about six minutes.

But water gas is nonluminous. It burns with a pale blue flame like that of an alcohol lamp. It is unfit, therefore, for use as illuminating gas, and to render it commercially adapted for that purpose it is enriched by mixing it with a hydrocarbon illuminating gas made from oil. This enrichening gas is generated in the carburetter, which is also a large steel cylindrical shell connected with the generator by proper valves and pipes. The interior of the shell is lined with fire brick, and in addition the entire interior is filled with fire brick laid criss cross or checker fashion so that throughout the interior, interstices exist between the bricks so as to admit of the passage of the products of combustion. The fire bricks in the carburetter are heated during the blast period by the burning of the gases generated in the generator during the blast period. What is known as "producer gas" results from the combustion which takes place during the blast period, and is carried over in the carburetter, and there ignited and the bricks heated by means of this combustion. The fire brick in the carburetter are brought to a very high temperature, and then during the "make" period petroleum oil is sprayed into the carburetter and when it comes in contact with the bricks heated to a white heat the oil is converted into hydrocarbon gases of high candle power, and this gas forms about one-third of the ordinary commercial illuminating water gas. The enriched water gas thus formed, however, is not sufficiently stable for distribution for

commercial uses. It requires "fixing" before being adapted for that purpose. This is accomplished in the superheater which is also a large cylindrical shell corresponding very closely in size and construction to the carburetter. The fire brick or checker brick in the superheater are also heated by the combustion of unconsumed producer gas generated in the generator during the blast period. In other words, the combustion in the carburetter is regulated in such a manner as that all of the producer gas is not there consumed and the excess passes over into the superheater, where in that shell a secondary combustion takes place which raises the temperature of the brick in the superheater to a sufficient degree to "fix" the gas when it passes from the carburetter through the superheater; thence into the condenser where the moisture in the gas is eliminated. And thence the gas is passed into the scrubber and further purifying apparatus before it reaches the holder for distribution.

In this inquiry with respect to the character of the fuel of course we are principally concerned with the generator and the processes there carried on.

All of the expert gas operators testified, and indeed it is a self evident fact, that it is utterly impossible to maintain the proper heats in the generator, or to bring the steam properly in contact with the carbon, unless the fuel bed lays in a loose and porous condition.

Mr. Pederson who was one of the Construction Company's expert operators during the test, and who qualified as a man of large experience in the gas business, testified that it was indispensable to have a more or less uniform fuel as near as could be as to size, and he ex-

plains that in this generator the fire bed was carried to a depth of eight to ten feet; that it is necessary to have fuel of uniform size in order that interstices may be left in the fuel bed through which the air and steam may pass, and thus be brought in contact with the largest possible carbon surface.

Q. (By the court.) “You want bricks then of uniform size—or the fuel whatever it is of uniform size?”

A. The fuel whatever it is should be of uniform size, and of such consistency as to retain that shape in the fire until it is consumed; it won't retain that size, but the gradual combination of carbon and oxygen reduces the size of the lump so that by the time it reaches the grate bars it is very much smaller, but not entirely consumed.” [Tr. 410, 411.]

The same idea is explained by Engineer Guldlin who testified for the defendant, and it was demonstrated by him that charging the generator with a fuel that would pulverize or crumble would not only have the effect of packing the fire bed so as to render it impossible to bring the oxygen of the air and the steam in contact with a sufficient quantity of carbon to produce anything like satisfactory results, but such packing also had the effect of making it necessary during the blast period to increase the blast pressure in order to get the air through the fire bed at all, and when it was gotten through at the increased velocity that this packing of the fire made necessary, it would unavoidably carry abnormal quantities of fine dust over into the carburetter, and thus destroy the efficiency of that unit also. (Testimony of Guldlin, pages 608, 609.)

Mr. White, another expert operator, who testified for

the defendant, advanced a similar opinion (page 548), as did also Mr. Pederson (page 523).

Indeed plaintiff's witnesses themselves would not question the logic of this proposition, although they did lay some stress on the fact that in the operation of three small water gas generators in their plant it had been their custom at times to use the lamp black in the form of lumps of varying sizes. Their practice had been at times to spread the material over the ground and let it dry, roll it and then plow it up and use the lumps in their water gas machines; but while we do not deny the possibility of making water gas under such conditions, the established fact is that it is utterly impossible to obtain anything like the approximate capacity of a water gas machine unless the fuel is charged into the machine in an approximately uniform shape and of a quality sufficiently durable to hold that shape in the generator. The records of the capacity and economy of their own machines furnish a sufficient demonstration. They have four gas sets and they consume anywhere from thirty to sixty pounds of carbon per thousand feet of gas, and all four machines output only in the neighborhood of a million and a half cubic feet per day. [Tr. 392, 393.] See also Creighton's testimony, page 702, 703.

And no better illustration of the disastrous effect of attempting to use a fuel that has a tendency to disintegrate or pulverize in the generator could possibly be furnished than what developed in this apparatus during this final test. We shall hereafter show that approximately one-third of all of the fuel that was charged into the generator crumbled up and was pulverized to such

an extent that it was utterly impossible to maintain anything like a uniform fire. That almost throughout the entire operation large masses of unignited carbon existed in the center of the fire and in order to get air through it at all it was necessary to blast the same under such pressure that large "blow holes" constantly appeared in the fire bed, and enormous quantities of the fine and pulverized dust was blown over into the carburetter with the result that it clogged up in the first three days operation, rendering it necessary to cease operations and replace the checker brick; that after resuming operations the same condition prevailed, and again toward the end of the test the carburetter was practically incapacitated.

So that to say that the parties when they used the expression "lamp black fuel" in their contracts should have had in mind the use of that material in a crumbly or friable condition or any other form than that of brick substantially compressed, is inconceivable. It might just as well be said that they intended by the use of the term that chemically pure carbon in the form of lamp black should be used. Such a construction would render the contract unreasonable and impractical, if not utterly impossible of performance. Such a construction should never be adopted when a different interpretation would render the contract fair and just, and is equally consistent with the language of the instrument. Or as stated by Mr. Justice Shaw in *Stein v. Archibald*, 151 Cal. 220:

"It is a well stated principle applicable to the construction of contracts that where one construction would make the contract unreasonable, unfair or unusual or extraordinary, and another construc-

tion equally consistent with the language would make it reasonable, fair and just, that the latter construction is the one which must be adopted. It is also a principle of construction with respect to ambiguous contracts that the circumstances surrounding and known to both the parties at the time of the execution of the contract may be taken into consideration in determining the meaning intended to be conveyed." (*Id.* 223.)

Again, in the language of Circuit Judge Sanborn in *Leschen etc. Company v. Mayflower etc. Company*, (C. C. A. 8th Circuit):

"Where the language of an agreement is contradictory, obscure or ambiguous, or where its meaning is doubtful so that the contract is fairly susceptible of two constructions, one of which is fair and such as prudent men would naturally execute, while the other makes it inequitable, unusual and such as reasonable men would not be likely to enter into, the interpretation which makes it a rational and probable agreement must be preferred to that which makes it unusual, unfair and improbable contract."

*Leschen etc. Co. v. Mayflower etc. Co.*, 173 Fed. 855.

Moreover, in view of the indefinite expressions in the contract with respect to the character of the fuel to be used, and the manner in which it was to be furnished, we have a right to look, and it is our duty to consider, the correspondence and negotiations that took place between the parties at the time the contract was made, and when we do look at the declarations of the parties themselves as contained in this correspondence there cannot be the slightest doubt left in the minds of any one that it was

intended that this lamp black should be furnished by the Gas Company in the form of substantial bricks, made after the material had been dried to a moisture content of 10% or less. We suppose that counsel for appellant will agree that it is proper to consider this correspondence for the purpose stated because the letters to which we refer were introduced by themselves for the avowed single purpose of supplying the information lacking in the contract as to what the parties meant by the expression "lamp black fuel."

If, however, there could be any doubt of the propriety of considering this correspondence for the purpose stated, we have abundant authority to sustain our position.

United States v. Bethlehem Steel Company, 205  
U. S. 105;

Balfour v. Fresno Canal Company, 129 Cal. 221;  
Seitz v. Brewer Refrigerating Company, 141 U.  
S. 510, 35 L. Ed. 837;

Kilby Manufacturing Company v. Hinchman  
Fire Proofing Company (C. C. A., 8th Cir.),  
132 Fed. 957;

S. M. Hamilton Coal Company v. New York  
Coal Company, (C. C. A. 2nd Circuit) 160  
Fed. 75;

Stoops v. Smith, Mass. 97 Am. Dec. 76;

Garfield etc. Company v. Pennsylvania Coal Com-  
pany, Mass. 84 N. E. 1020.

For the purpose then of ascertaining the intent of the parties, we may turn to the correspondence out of which the guaranties in this contract grew, and which corre-



spondence as we have before stated were introduced by plaintiff's counsel for the single purpose of ascertaining what the parties meant by the term "lamp black." (See counsel's statement of the purpose of offering this testimony, page 160, pages 184, and 188.)

First is a letter from Mr. Pederson as the agent for the construction company to the gas company, dated February 20, 1907. It shows that the gas company was negotiating for an apparatus for the manufacture of water gas from lamp black fuel. It shows that the use of lamp black fuel for that purpose was a new experience to the construction company, but "being" pure carbon the supposition would be that it would make an ideal fuel. (Page 161.) The next is a letter from the gas company to the construction company, dated March 5, 1907. In that letter Mr. Luckenbach, the manager of construction, gives a clear and full statement of all the conditions upon which the guaranties are to be based and the machine operated. In this letter Mr. Luckenbach solicits a guaranty to accompany their proposal and states:

*"In order that no misunderstanding may occur the carbon to which we refer is a bi-product from the manufacture of oil gas with which you are undoubtedly familiar. The way we are handling this at present is: We convey it from the wash box by flume to settling pits where the water is drained off and then the carbon is either passed through a drier or hauled into piles and sundried, and then made into bricks or taken in large lumps from the pile and put into the generator.*

*"We are now negotiating for the purchase of a drier to handle all of our product and anticipate that this drier will turn out our carbon with from 5%*

not to exceed 10% of moisture. *After passing the drier the same will be bricked for use in the generator.*"

Again on March 11, 1907, Mr. Guldlin, president of the construction company, wrote acknowledging receipt of the letter of March 5th, and expresses his surprise that the lamp black could be used in the generator in the form of lumps from a sun dried pile "as the writer would hardly believe that the fuel would be compact enough to retain its shape in a fuel bed by having merely been sun dried. \* \* \* The natural inference would be that the lumps would crumble up and pack over the grate and in the lower part of the fire." (*Id.* page 166.)

This shows beyond question a clear understanding of the necessity of having a compact brick in order to get the best results, and this letter in connection with the letter of March 5th, shows conclusively that all parties understood that the guaranties were based upon the distinct understanding that the fuel was to be furnished in the form of bricks, and of substantial character, and made after the material had been dried to 10% or less of moisture.

Besides that the evidence shows that samples of the material had been submitted by the gas company to the construction company, and impliedly of course, it was understood that the quality of fuel to be used would be equal to the sample. Mr. Pederson testified that during the negotiations Mr. Luckenbach explained that the gas company was at that time briquetting the lamp black for commercial use, and that they were contemplating the installation of apparatus to dry out the lamp black, and

that they would then brick the material and furnish it to the construction company for use in the machine.

“I asked him if they had any of it on hand so that we could determine the quality of it, and he told me that they had down to the gas works, and he told me that I could go down and see Mr. Millard, the superintendent, and he would show me samples of the material they intended to use, but not in the shape. He would show me the quality.

Q. Did he tell you what difference there would be or might be in the shape as compared with the sample shown you?

A. He did. He said they contemplated putting in a machine to make a brick form rather than a briquette, but they contemplated this bricking machine for that purpose, and contemplated purchasing it for that purpose.” (*Id.* pages 402, 403.)

The term briquette is used by the witnesses to designate the lamp black material as it is compressed for sale commercially as a domestic fuel. It is about the size and about the shape of a small drinking glass, while the material as it comes from the brick press is about the size and shape of an ordinary building clay brick.

Again Mr. Pederson testified that he did obtain samples and made inquiries about them in order to form an opinion whether his company could handle the material in such a machine. After obtaining the sample he took the matter up again with Mr. Luckenbach

“and Mr. Luckenbach emphatically wanted it understood that we should have a certain quality of fuel in making this contract and getting results, and I think he said, ‘I do not want you to come back and say afterwards that we promised you bricks such as you have seen down there and have obtained, but we are installing a bricking machine and that will be the form of the brick, but it will be the quality

that you saw down there. It will be such fuel as that but in a different shape,' and says to have this absolutely without any misunderstanding, we had better write it down. I think he then wrote this letter (the letter of March 5th) to confirm his conversation with me." (*Id.* page 407, 408.)

He then explains that he forwarded both the letter and the samples of briquettes to the home office at Fort Wayne, and he explains further that a careful examination of the briquettes were made by him as to their stability; that they were hard and substantial and could not be broken by striking them together in an ordinary manner or dropping them on the floor "whereas I doubt if there was a brick supplied us during the test that would stand a drop of four or five feet from the ground." He also explains that the guaranties were based exclusively upon the information contained in the letter of March 5th, and what he learned concerning the quality of the fuel in the investigations which he made. (Page 410.)

Mr. Guldin, the construction company's president, also explains that their guaranties in the contract were made in view of the same information. (Pages 603, 604.)

In view of this correspondence and of these representations and the facts that were then before the parties when they made this contract, can there be the slightest doubt that the parties intended by the use of the term "lamp black" to mean lamp black supplied in either the form of a briquette or a brick solidly compressed after the material was dried to a proper degree of moisture?

Those things that are necessarily or properly implied in a contract are according to well settled principles of law just as much a part of the contract as the agreements expressly set forth therein.

“The stipulations which are necessary to make a contract reasonable or conformable to usage are implied in respect to matters concerning which the contract manifests no contrary intention.” (C. C. § 1655.) (Also C. C. § 1656.)

Mr. Justice Lorrigan in

Acme Oil Company v. Williams, 140 Cal. 681,

in which case there was involved an oil lease which was silent on the subject of whether there was any obligation on the part of the lessee to diligently pump the oil developed, said:

“Since the one consideration for the execution of oil leases is the share in the product which the lessor, either in kind or as royalty, is to receive, it is necessarily implied as of the essence of the contract that the lessee shall work the wells with reasonable despatch for their mutual advantage. It is not necessary that technical words should be inserted in such a lease in order to raise the condition. If a reasonable and fair interpretation of its terms shows that it was made to depend upon doing something essential to its object and purpose, the law implies the condition to attain that end.” (*Id.* 685.)

Approved:

Payne v. Neival, 155 Cal. 46; also

McIntosh v. Robb, 4 Cal. Appellate 486.

II.

Plaintiff was entitled to recover nothing in this action for the reason that no test of the apparatus was ever had under the conditions prescribed in the contract, particularly in this: that the Gas Company failed to furnish the lamp-black fuel in a condition reasonably fit for use.

The contract of July 12th provided for a test of this apparatus under the conditions therein prescribed. The rights of the parties were made to depend upon that test. One of the obligations of the gas company, as we have shown, was to furnish to the generator lamp-black fuel in a form reasonably adapted for the purpose intended. Compliance with all of these obligations was a condition precedent to the right of recovery of the penalty mentioned in the contract, to-wit, \$26,823.45.

The burden of proof of compliance with these requirements and the burden of proof of the breach of the warranties on the part of defendant rested upon the plaintiff.

Buckstaff v. Russell, 151 U. S. 626, 632;

Arkwright Mills v. Aultman Machinery Company, 145 Fed. 783.

The plaintiff sought to discharge this burden by introducing the correspondence which showed what the parties actually meant by the use of the term lamp-black; by proof that the test commenced on the 10th day of March, 1910, and ended on the 30th of March; that the record of gas actually produced showed less than 2,000,000 cubic feet per day; that the record of fuel consumption was greater than thirty-five pounds

per thousand, and that the candle power maintained during the test was less than twenty. Evidence was also introduced that the lamp-black was also furnished in the form of brick; but their own evidence shows that the lamp-black bricks furnished to this apparatus had been prepared from lamp-black which contained anywhere from fifteen to twenty-five per cent of moisture; that the bricks had been exposed to the rain for a considerable period, and then when the test started had been subjected to intense external fire-drying so that the moisture in the brick had been driven out, leaving them porous and fragile, although their operators do pretend in their testimony that the bricks were reasonably strong.

However, this question of the character of the bricks (and it is indeed the turning point in the case) was solely and exclusively a question of fact, and the lower court had the witnesses before it, heard all of the conflicting testimony upon the issue, and made the following finding:

“But the said bricks so furnished had been prepared by being compressed with moisture largely in excess of 10%, and the moisture then driven out leaving voids therein, and had been insufficiently compressed, and were so unstable that they were not able to withstand, and did not withstand the jarring necessarily incident to handling the same for fuel purposes in such apparatus. Notwithstanding the protests of the defendant during said test, plaintiff did furnish to defendant bricks which had been and were being throughout the entire test, subjected to external artificial heat or kiln-drying for the purpose of driving out moisture therefrom, and did also furnish considerable quantities of bricks which were still warm from said fires, which ren-

dered them unstable and easily disintegrated and practically all the brick furnished to defendant during said test were of such an unsubstantial character that great quantities of them were necessarily broken up and crumbled in the handling of them, and that this crumbling and powdering took place to such an extent as that great quantities of fine pulverized and crumbled material unavoidably found its way into the generator, with the result that the fuel bed was packed and its efficiency largely impaired, and with the further result that excessive and extraordinarily large quantities of dust were blown over from the generator into the carburetter, and tended to form a deposit upon the brick work in the carburetter, and to materially retard its function and impair its capacity.

“Throughout said test plaintiff continued to supply bricks of the character above described, to wit, so entirely lacking in firmness and stability as that practically all of them broke more or less in handling, and great quantities crumbled and pulverized to such an extent that at times more than one third, and almost constantly as much as 15% or 20% was screened out as waste, and at least as much more unavoidably went into the generator with the serious detrimental effects above described.”

See finding . . . . and also finding XII, p. 779.

That these findings find ample support in the testimony and indeed that no other conclusion could be reached from the testimony presented is, we think, sufficiently established by reference to the testimony of Messrs. Pederson and White alone, although plaintiff's own witnesses went far toward establishing practically the same condition of affairs described by these two witnesses. Mr. Pederson testified that the kiln dried bricks were full of fissures, and these fissures were so wide and open that it would be a matter of very little difficulty in



tearing the bricks apart. He describes the charging apparatus and shows the manner in which the fuel was handled. It was hauled for a few hundred yards in wagons to the charging apparatus. The wagons straddled a pit, and the bricks were dumped from a wagon down to a platform in the pit a distance of four or five feet. From there it was dumped into a skip a distance of two or three feet and was then hoisted to the top of the building where the skip or bucket was tipped over, and the bricks allowed to shoot down into the upper bin and collect there, ready to be discharged into the generator through another chute which was also built on an incline and afforded a slide to the generator. (p. 427.)

Now, this slide or chute leading to the charging door of the generator was perforated on the bottom by slits about three feet in length and about an inch and a half wide and three or four inches apart; that is, they were in series of intervals of about six or eight inches and three or four inches apart. [White's testimony, pp. 569, 570.]

Mr. White perforated this chute in this manner just a short time before the test began, in order to sift out the dust in the carbon, and the broken pieces, which, if they were allowed to pass into the generator, had a tendency to pack the fire; but this chute was necessarily on quite a steep incline, and the testimony shows that while these perforations had the effect of eliminating a large quantity of the fine material that otherwise would have gone into the generator, yet that unavoidably great quantities found their way into the generator, with the disastrous results that we have described.

As said before, the bricks that were delivered to this generator had been made several months previously and had been stacked on the premises and subjected to air-drying, but nevertheless, on account of the moisture which they had absorbed from rainstorms, and on account of the fact that they had been bricked from material that contained anywhere from fifteen to twenty-five per cent of moisture, practically all of them contained more than ten per cent. at the time of the test. [Page 255.]

In December of 1909, while Mr. White was experimenting with the apparatus to ascertain the quality of brick most desirable to use, the question arose as to whether it would not be advantageous to use a brick containing more than ten per cent. of moisture. Mr. Millard, the gas company's superintendent, urged the construction company's operators to use such brick, claiming that it gave better results and held its shape more satisfactorily than a drier brick [p. 511].

Mr. White was at first disposed to adopt this suggestion, and accordingly, on December 13, wrote the gas company that he "preferred, if it was agreeable to the gas company, to use bricks for the new machine containing, say, from sixteen per cent to twenty-five per cent. moisture, instead of ten per cent., as formerly" [p. 207].

After some experimenting with these bricks, when Mr. Pederson arrived upon the ground, and after an unsuccessful effort was made to get credit in weight for this excess moisture in the fuel economy calculation, this request was revoked, and the announcement

made by letter of December 28, 1909, that while the fuel which the gas company had on hand was satisfactory, yet, "We feel that it must be protected from additional moisture, and would ask that you protect the fuel that you have ready for us from rain and from moisture that may be precipitated upon it" [pp. 207, 208].

The gas company's employees testified that they did make efforts to protect it by covering it with tarpaulin and other material, but nevertheless it was admitted that before the time for the test arrived, considerable moisture had been absorbed, so that the moisture content was largely in excess of ten per cent.

To correct this condition, the gas company, without the consent of the construction company, piled the brick in kilns and built immense fires around them so as to drive out the moisture. (Luckenbach's testimony, pp. 289, 290.) And this kiln-drying process continued throughout the test in spite of the protests of our operators, as we shall hereafter show.

There is a conflict in the testimony as to the effect of this kiln-drying. Messrs. Creighton, Young and the chemist, Wade, of the gas company, claim that the kiln-drying process had no detrimental effect, although Mr. Creighton admitted that the fire-dried brick did crumble to some extent. (p. 388.) But, on the other hand, our witnesses, particularly Mr. Pederson and Mr. White, one or the other of whom was there on the ground constantly, and who observed their action at all times, testified positively that the fire-drying totally destroyed the stability of the brick, and the court below believed them.

Mr. Pederson testified that when he reached Los Angeles on the 12th of March, he observed the character of the fuel, and it was so poor that on the 13th it became apparent that so much fine dust was blowing over into the carburetter that it would be necessary to shut down and clean it out. After re-starting the machine, the fuel was equally bad, if not worse.

“We found considerable dust going with it, and began to have fire trouble. We did not seem to be able to get fuel for any length of time that we could depend on at all. Occasionally they would give us a load that was fairly good—better than the other fuel, but we found it was in poor condition generally. After the protest on the 18th of March, we had a few loads of a little better brick, and about the time we would think we were getting the fire along in a little better shape, they dumped a load of this other stuff and it ruined our fire again.” (P. 437.)

Mr. Pederson then describes the appearance of the fire, and describes the holes that the blast would cause in the fire bed on account of its being packed and smothered. He says:

“That is a condition that will occur with fuel of that character. The blast will work on one spot and may find one opening. It is always working to find an opening through the pile and after it has obtained an opening it will blow that place clean of dust for a time and it will make an aperture for the steam to come through. The steam follows the same course. Then, naturally, the surface being small and the quantity of steam large, it quenches the fire at that point and develops what we call a black spot in the fire. When that does appear, it means that we are passing great quantities of steam through an opening but not getting the efficiency of

the machine or the fuel. It is a condition that must be remedied immediately. As soon as the black spot is observed we remedy it by trying to pour more fuel in, and closing it up and diverting the steam to other parts of the fire.” (*Id.* 439.)

A written protest was made by Mr. White on the 18th of March, to which we will refer hereafter, and Mr. Pederson testified that after that protest

“there was something said about giving us a different fuel, and the gas company did give us different fuel for a short time. But it gradually became worse and worse, and while they would shoot in a load of a little better fuel, the general conditions were not much better than they were before—the average condition.”

Mr. Pederson then testifies that not only did they supply this kiln-dried, porous and unsubstantial fuel against their protest, but they even went so far as to take the brick directly from the kiln, before they had cooled off, and supply them to this machine. Such brick, according to Mr. Pederson, could be made to fall apart by simply squeezing them.

“It seems the characteristic of the fuel was that while it was hot it had a tendency to fall apart by its own weight, almost, or at the lightest touch.”

“Q. To what extent were these bricks delivered there?”

“A. I should say at that time (referring to the 18th) probably fifty per cent. of the bricks delivered were these freshly heated bricks, or not cold bricks, but warm bricks.” (pp. 440, 441.) (See also p. 514.)

Mr. Pederson, asked as to the quantity of this porous, insubstantial fuel that went into the generator, said:

"Different quantities of the fine fuel each day, and some days it would be abnormally bad and we would get more of this dust over, but just to what per cent. I would not be able to say. It would be, I should judge, about the same per cent. that the waste carbon would show to the carbon delivered. It would approximate the same."

Mr. White is even more emphatic in his denunciation of the poor condition of the fuel and the disastrous effects of it. He said that kiln-drying of the bricks undoubtedly destroyed their tensile strength and they went to pieces very rapidly and easily. They would not stand handling.

"The principal and most perceptible observation of their breaking was from the time they left the hole down in the ground and going over the chute—became dumped over. And they had a severe fall from there down to get into the bottom of the bin that connects into the chute. They were rumbling over each other and rattling down and rattling that quite and bouncing over each other. That is where the severe strain was on the brick. It knocked them all to pieces." \* \* \* "The dust was something fierce. You could not recognize it while you were charging standing two feet away from it. It was just one mass of dust from the fine and dried kiln-dried bricks. The dust they formed was like you take a dusty street with a descent heavy, rumpeding. It was something fierce." (pp. 54, 55.)

A considerable part of the broken material and fine stuff went through the slots in the chutes and there was a great deal of dust that went into the generator.

"I should say that the slots would not be able to catch one-half of the fine dust that went into the

generator, not counting the broken bricks. It was exceptional that a whole brick ever went in. They were generally broken in two. But if they were all like that we would not have complained—if they had held together in that respect. But they went apart in pieces.” (p. 546.)

He then describes the effect that it had upon the fire, which was to dullen and pack it. (546.)

“I mean to say that if thirty per cent. of fine stuff was caught on the floor through the chutes there was at least thirty per cent. more of fine stuff that went by the chutes that did not fall, and went into the generator. That is, of course, only estimated. I had no way of telling the exact amount. But the amount of fine stuff that went by was material—very material.” (pp. 546, 547.)

He then describes the appearance of the fire and shows the impossibility of getting good results unless the fire is loose and the steam and air can be brought in contact with the whole mass. He also testified that the packing of the fire necessitated increasing the blast and that had the effect of carrying large quantities of fine stuff over into the carburter. (p. 548.)

But evidence of a most conclusive character, not only of the ruinous character of the bricks that were furnished as fuel, but also of the antagonistic and unfair attitude of the gas company officials, is furnished in the written protests that Mr. White made on the 18th and 23rd of March, and the replies of Mr. Luckenbach thereto, and his evidence concerning the same. This incident, to our minds, raises almost an irresistible inference that the gas company did not want this machine to make good; that on the contrary they expected to seize upon any pretext

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“The principal and most perceptible observation of their breaking was from the time they left the hole down in the ground and got upon the chute—became dumped over. And they had a severe fall from there down to get into the bottom of the bin that connects into the chute. They came tumbling over each other and rattling down and hitting that gate and bouncing over each other. That is where the severe strain was on the brick. It knocked them all to pieces.” \* \* \* “The dust was something fierce. You could not recognize a man while you were charging standing two feet from him. It was just one mass of dust from the fine and dried kiln-dried bricks. The dust they formed was like you take a dusty street with a dozen horses stampeding. It was something fierce.” (pp. 545, 546.)

A considerable part of the broken material and fine stuff went through the slits in the chute, but there was a great deal went past the chutes into the generator.

“I should say that the slits would not be able to catch one-half of the fine dust that went into the



generator, not counting the broken bricks. It was exceptional that a whole brick ever went in. They were generally broken in two. But if they were all like that we would not have complained—if they had held together in that respect. But they went apart in pieces.” (p. 546.)

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to force the defendant to remove it and to recover their money, and throughout these operations they were preparing themselves for this lawsuit.

Mr. White's letter of March 18 is addressed to Mr. Luckenbach and opens with a protest against the character of the fuel. He recites that the bricks crumble and break all to pieces in going down the chute:

“To confirm the statement you will only have to look at the report for fine carbon returned or credited to us yesterday. Ordinarily after each charge there were only about three wheel-barrow loads of fine stuff on the floor which had dropped into the chutes. Yesterday there were from eight to eleven wheel-barrow loads after each charging. It is evident that the process which you use in drying out these bricks has had a tendency to disintegrate them. Previously, although they were dry, as analysis showed, they held together as well as any of the bricks containing a larger percentage of moisture. But these kiln-dried bricks have not enough tensile strength to keep them from going to pieces and powdering up. We demonstrated by the first two days operation that the machine could make from 2,400,000 to 2,700,000 feet per diem. If the carbon would hold together as well as the carbon used at that time, we could undoubtedly do better than we did on the days we made between 2,400,000 and 2,700,000, but it is unreasonable to suppose that we can operate the machine on fuel containing such a large percentage of fine carbon, which is not only worthless but a detriment. It looks bright enough from the top charging floor, but as soon as the steam strikes it it kills it. We made yesterday only 2,166,000 feet. If the carbon continues to be no better than that used yesterday and this morning, I doubt very much if we can even make 2,000,000 feet today and the following days.

“If you can give us a grade of fuel similar to what we have previously had, we can undoubtedly work

the fine stuff out and build up the fire again, but if the carbon continues to be as bad as above stated, we cannot expect to obtain efficiency. We have rechecked the carburetter and are now positive that it is none other than the dirty fuel which gave us the poor results obtained yesterday." (p. 223.)

Now, here was a plain statement of facts, made while the test was progressing. To verify it, it would only have been necessary for Mr. Luckenbach to have gone to the machine and observed the conditions. Instead of that, upon receipt of the letter, he took his lawyer and made a trip to the office at the plant and interviewed Mr. White.

Mr. White testifies that when Mr. Luckenbach arrived, he asked him to go to the machine and observe the conditions, but Mr. Luckenbach refused. "He said he would not come over and dirty his clothes going over there." (p. 554.)

Mr. White says that he produced at that time four or five hot bricks and showed them how they crumbled; that they were all full of fissures, and that the kiln-drying in driving the water out had undoubtedly loosened up the openings or fissures. He also testified that he informed Mr. Luckenbach that the bricks were something awful; that he could not make gas with them; that they were crumbling so that it was impracticable and it was absolutely useless to continue trying to bring about satisfactory results; that the carbon was ruined on account of being kiln-dried; that the bricks would not stand up at all; that there was no tensile strength;

"but I asked him if it would be agreeable to let us use some of the moister bricks, stating that they

could not be any worse than these, and we might be able to work out; *and he said no.*" (P. 553.)

Now turn to Mr. Luckenbach's testimony.

He said he received this letter on the morning of the 18th and immediately made a call at the plant with his attorney. He met Mr. White at the office. He first denied that Mr. White produced any samples for the purpose of showing their unsubstantial character, but afterwards admitted that it was a fact that samples were produced. He produced a memorandum which he said had been written by him after returning to his office, as a record of what had taken place, and from that memorandum he testified:

"Mr. Edwards asked Mr. White the distinct question whether the bricks furnished him for use in the generator were in good condition when he received them. He replied that they were and that they were all right. He stated that the bricks at the time they were delivered to him were whole, good bricks, and the breaking up of which he complained occurred after the bricks were put into the chute and during the time they were passing from the entrance of the chute into the generator and while handling them through his own apparatus." (pp. 277, 282.)

After obtaining that admission he and Mr. Edwards left and returned to the office. He was asked:

"Why didn't you go over and find out what the situation was?" Answered that, "We were down there to see what those bricks were, and Mr. White told Mr. Edwards the bricks were satisfactory, and we went back. I had heavy work, and I went back to take care of it."

"Q. You went down there to see what the con-

dition of the bricks was; why didn't you go over and see?"

"A. I did not care as long as they were satisfactory to the representative of the construction company."

"Q. After he had informed you that they were satisfactory, did you ask him why he had written you the letter previously complaining that they were not satisfactory?"

"A. No, I did not."

"Q. Didn't it occur to you that it was inconsistent with his writing of the letters to say that they were satisfactory?"

"A. I did not care whether it was consistent or inconsistent."

The absurdity of the claim that Mr. White expressed satisfaction with the brick that he was receiving on the very day that he wrote this vehement protest and on the very day that he had exhibited samples to Mr. Luckenbach for the purpose of showing the impossibility of making gas with them, is alone enough to discredit the entire case of the plaintiff, but when these inconsistencies are considered in connection with the letter that Mr. Luckenbach wrote after he returned to the office, the unfairness of his position is made the more glaring and reprehensible. He says:

"We beg to reply that we are furnishing you lamp black fuel containing not more than ten per cent. moisture, and the said fuel we are furnishing you is in every respect strictly in accordance with the terms and conditions of our contract. You have in the past specifically demanded that the fuel furnished to you should comply strictly with the terms of the contract, and in order to comply with your request and to perform our contract in every detail, we have at a great expense and inconvenience

to ourselves taken the precaution to see that every pound of lamp black delivered to you contains not more than ten per cent. of moisture, and every pound of lamp black delivered to you in this test has been absolutely in accordance with the terms of our contract. Your request at this time that the lamp black furnished to you be furnished in the form of bricks which cannot be broken is unreasonable and not in accordance with our contract requirements. We call your attention to the contract which simply requires that the fuel furnished by us be 'dry lamp black containing not more than ten per cent. moisture' and in no place does the contract require us to furnish you lamp black in the shape of bricks or in any congealed form whatsoever. At the times when we have furnished you lamp black in the form of bricks, it was because it happened to be convenient at that time to deliver the fuel in that form, but the contract does not require us to furnish the fuel in the form of bricks or in any given form, and certainly does not require us to furnish the fuel in the form of bricks of such unusual properties as you suggest. Such was never contracted for or contemplated between the parties.

"If your set will not make the quality and quantity of gas with the fuel economies provided for in the contract, such failure is certainly due to an inherent defect in the set itself and not in the quality of the fuel furnished you." (pp. 225, 226, 227.)

Why did he not remind Mr. White of his expression of satisfaction with the bricks? Why did he not inclose a copy of his memorandum of the interview? The obvious reason is that no such remark was made; and he knew that such a suggestion would only call forth an emphatic denial.

Moreover, we insist that this letter contains almost, if not quite, a complete confession of the ruinous consequences of fire-drying the brick. If the process did no

damage to the brick, or increased its efficiency, would it not have been the most natural thing in the world in this reply to have made some defense of the process? Instead of attempting to justify the artificial drying process that was so objectionable to Mr. White, he falls back on the strict letter of the contract and rests content with the denial that they were under any obligations to furnish the material in any particular form, shape or quality, so long as it contained ten per cent. moisture. Such a position, as we have already shown, his own counsel at the trial of this case, while asserting the same in a half-hearted manner, nevertheless practically concedes is not maintainable. Mr. Luckenbach had not at that time realized that this material which they were required to furnish for fuel in order to be lamp-black according to the strict letter of the contract, must be chemically pure carbon. He had overlooked the fact that the material called lamp-black at a gas plant contains anywhere from twelve to twenty per cent. of tar or other hydro-carbon impurities. It was not until these considerations presented themselves to their minds at a later stage of the controversy that it became evident that they could not stand upon the strict wording of the contract without committing their poisoned chalice to their own lips.

It will also be asserted, no doubt, in defense of such conduct, that the gas company was not in a position to supply bricks of any other quality, nor to reduce the bricks on hand to a moisture content of less than ten per cent. without kiln-drying. But consider such a defense in the light of Mr. White's protest of March 18, Luckenbach's reply, and Mr. White's testimony as to the in-

terview. All that Mr. White asks for in the letter of March 18 is brick of the same character and quality that had been supplied in the early days of the test. Or a fair construction of his letter is that he would have been satisfied if they would stop kiln-drying them, and certainly, taking this letter in connection with his own testimony, it is established that he would have been content with that.

White asked him if it would be agreeable to let him use some of the moister bricks, stating that they could not be any worse than these, "and we might be able to work out, and he said no." (p. 553.)

And again, at the same interview, Mr. White testifies:

"He (Luckenbach) came right down to the works with Mr. Edwards and wanted to know what the matter was. I told him the bricks were hot and that it was useless to go on under such conditions, and I asked him if he would—if it would be agreeable to him if I would take the wet brick that he had to use half and half—half wet and half dry—to see if we could not build up the fire and get some results. *And he said no. We had to use what they gave us. We had asked for carbon having less than ten per cent. moisture and they kiln-dried it, and that is what we had to use. I showed some of it to the superintendent in his office. He said that did not make any difference, that it was up to us.*"

"Q. On that occasion, or any other occasion, did you tell Mr. Luckenbach that the bricks as you had received them had been satisfactory?"

"A. I did not." (pp. 552, 553.)

Fancy such a refusal under such circumstances of such a request by the representative of the gas company! It could not have proceeded from any other motive than malice. It cannot be explained upon any other hy-



pothesis than that the gas company did not intend to have this apparatus, or to pay for it, or to permit the test to show the real capacity of it, or at least, if Mr. Luckenbach could help it.

It would have been so simple to have complied with the request. It would have saved the gas company all the expense of fire-drying; it would have been some evidence of their good faith toward the construction company, and it might, and probably would have, resulted in the fires in this apparatus being restored to normal conditions and a capacity probably largely in excess of two million cubic feet per day demonstrated.

But even aside from this request to furnish bricks other than kiln-dried, even though they contained a greater percentage of moisture than ten per cent., there is no justification for the claim that the gas company was not in a position to furnish bricks of less than ten per cent. moisture without kiln-drying. Mr. Creighton shows in his testimony that a large quantity of the outside layers of the bricks that were kiln-dried contained less than ten per cent. (pp. 686, 688, 689.) (Mahard, pp. 319, 321.)

But aside from this, their letter of March 5, 1911, shows that they were then purchasing, and the evidence shows that they did install a drier by means of which the brick could have been dried to a moisture content of less than ten per cent. and bricked. It is true that Mr. Creighton claims that the drier would not reduce the material to that degree of moisture, and he also made a strenuous effort to show that it was not practicable to

brick such dry material, but the testimony of Mr. Pederson (p. 428) is to the contrary, and it would seem to be a self-evident proposition that it is practicable to brick the material with no moisture at all. It is an admitted fact that the tarry hydro-carbon substances which form about fifteen per cent. of these bricks is in the nature of a binder and acts as such in the process of bricking. It is absurd to say that water could act as a binder, especially in view of the testimony of our expert chemist, who said that it was impossible that the water could act as a binder, or that there was any reaction that could take place between the moisture and the carbon which would have the effect of making the material more readily bricked. (Chandler's testimony, p. 756.)

But even it if were true that bricking this material after being dried to ten per cent. was impracticable, it is in evidence that besides the bricking machines that were installed at this plant, the company was then operating briquetting machines and making good, substantial briquettes which could have been supplied to this apparatus, and which would have no doubt held their shape and enabled the construction company to have more than fulfilled the guaranties. We have already called attention to the evidence which showed that at the time the contract was made, the gas company was manufacturing good, hard, substantial briquettes, and in Mr. Young's testimony we have a complete account of the success of their briquetting operations, taken from a magazine article which he had written on the subject. (pp. 742, 745.) It is there shown that at the time of

the test they had briquetting machines of about thirty tons capacity per day (p. 745) and they had bricking machines of a capacity of about sixty tons (p. 241.)

Nothing could be more evident, then, than that the gas company was in a position to have supplied a good, substantial brick or briquette of less than ten per cent. moisture, and certain it is that they could easily have complied with Mr. White's request to furnish stronger bricks, even though they did not contain less than ten per cent. moisture.

Again, on the 23rd day of March, 1910, Mr. White addressed another protest to Mr. Luckenbach. He says that "the bricks are the worst for breaking up that we have ever had. I notice this morning they are still hot from the fires you build to dry them out. I call your attention to the fact that last night after two charges, the man wheeled away from under the chutes seven and eight wheel-barrow loads, respectively; this morning twenty-three." He gives further particulars and states that a great deal of the fine stuff handled went into the fire, and the result of last night's make shows clearly the result of a dirty fire. He says further, "You can readily understand that it would not be considered possible for a machine to make gas advantageously where fuel of this character is being introduced. Might as well expect a water gas set using coal to make gas and keep up the standard if breeze is substituted instead of coal.

"I have your letter of the 18th and note your remarks regarding the character of the carbon to be furnished, etc. Will not go into this matter as I have not the data to discuss the question. However, I have been under the impression that your company was to co-operate with us

in every way to bring about the successful operation of this machine; but it would seem impossible if we were to meet the guaranty using the character of fuel furnished." (pp. 227, 228.)

Mr. Luckenbach's reply to this letter is as follows:

"Replying to yours of the 23rd instant, beg leave to say that an answer to this communication is contained in our letter of the 18th instant, receipt of which you have acknowledged." (*Id.* p. 229.)

So we see the extent of the co-operation and all of the consolation that Mr. White got for his efforts. The company were standing strictly upon their then interpretation of the contract, according to its strict letter, that in whatever bad form the material may have been furnished, still, they were complying with their contract if it contained less than ten per cent. moisture.

Still further most significant evidence of the bad character of the fuel and the crumbling that took place, is furnished by the records of the waste resulting as compared with the carbon used.

The following is a tabulation of the gas produced, carbon used, and the waste and ash which was removed from the machine:

Date.	3/10	3/11	3/12	3/13
Corrected Gas	2,700,000	2,422,000	2,247,000	1,936,000
Total Carbon	134.275	97.775	90.700	69.350
Waste Carbon	11.100	16.200	14.050	20.325
Ash	12.000	9.000	4.850	6.000
	(Estimated)	(Estimated)		

Date.	3/14	3/15	3/16	3/17
Corrected Gas	72.300	107.000		2,039,000
Total Carbon		8.000		103.200
Waste Carbon	(Shut down 3 days rechecking)			32.800
Ash	73.50			2.200

Date.	3/18	3/19	3/20	3/21
Corrected Gas	2,095,000	2,028,000	2,130,000	2,171,000
Total Carbon	84.000	86.510	85.575	90.700
Waste Carbon	28.675	16.250	10.850	7.550
Ash	9.750	10.500	5.450	7.550

Date.	3/22	3/23	3/24	3/25
Corrected Gas	2,074,000	2,008,000	2,015,000	1,956,000
Total Carbon	90.565	74.525	81.520	72.925
Waste Carbon	13.960	23.700	9.720	13.700
Ash	9.000	10.100	8.465	8.000

  

Date.	3/26	3/27	3/28	3/29
Corrected Gas	1,950,000	1,824,000	1,640,000	1,292,000
Total Carbon	57.600	53.215	58.700	34.750
Waste Carbon	18.900	12.375	7.900	12.100
Ash	4.600	2.150	4.300	5.300

The waste carbon is the carbon that fell through the chutes while charging, and the ash is the unconsumed carbon that was removed from the dust chamber which collected a portion of the dust which blew from the generator to the carburetter, and unconsumed carbon taken from under the grate bars. The ash for the first two days, March 10 and 11, is an estimate, as no record was kept of the weight of that material for those two days. This tabulation is made from the tabulation contained in the evidence, as follows:

Gas production, page 347.

Schedule of waste carbon described as ash, page 542.

Schedule of carbon consumed and waste carbon, page 542.

From the foregoing it will appear that the percentage of waste carbon which fell through the chutes to the total carbon consumed, and also the percentage of ash to the whole carbon delivered, and the totals, are as follows:

Proportion waste carbon falling through chutes each day, to the total carbon delivered for that day.

3-10	3-11	3-12	3-13	3-14	3-15
8%	16.5%	15.4%	29%	0	0
3-16	3-17	3-18	3-19	3-20	3-21
0	31.7%	34%	18.7%	12.6%	8.3%
3-22	3-23	3-24	3-25	3-26	3-27
15.4%	31.8%	11.9%	18.7%	32.8%	23.2%
3-28	3-29				
13.4%	34.8%				

Percentage of ash removed each day, of the whole carbon delivered.

3-10	3-11	3-12	3-13	3-14	3-15
8.9%	9.2%	5.3%	8.6%		0
3-16	3-17	3-18	3-19	3-20	3-21
0	2.1%	11.6%	12.1%	6.3%	8.3%
3-22	3-23	3-24	3-25	3-26	3-27
9.9%	13.5%	10.3%	10.9%	7.9%	4.4%
3-28	3-29				
7.3%	15.2%				

Percentage of waste carbon from the chutes, for the full time of the test, of the total carbon delivered during the entire test.

Total carbon delivered	1,373,885
Total waste carbon from the chutes	270,155
Percentage	19.6%

Percentage of total ash removed for the whole period, of all carbon delivered.

Total carbon delivered	1,373,885
Total ash removed	126,565
Percentage	9.2%

Percentage of both ash and carbon for the full period, to the total carbon.

Total carbon delivered	1,373,885
Total ash and waste carbon	396,720
Percentage	30.3%

Total gas made	34,706,300
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Now, taking these figures in connection with the testimony of both Mr. White and Mr. Pederson that fully as much fine material and pulverized brick went into the generator as fell through the chutes, a very significant idea of the extent to which the fire was smothered by the influx of this loose material may be formed.

On the whole, we respectfully submit that the evidence absolutely concludes the proposition that the generator in this water gas set was not given anything like a fair opportunity to show its capacity; that the crumbling of the fuel took place to such an extent as to be ruinous, and to render good results impossible; that the fire-drying to which the bricks were subjected was the primary cause of the unsubstantial character of the bricks, and under no circumstances or appearance of fairness and justice to the defendant, had the gas company a right to persist in that process. It stands to reason that if a brick contains, say, twenty-five per cent, moisture, that at least one-quarter of the volume of the brick is occupied by the water, and perhaps more, because the carbon is heavier and denser than the water. Therefore, it is a self-evident proposition that if you drive the moisture out of the brick, you are leaving one-quarter of the space in the brick void. Besides that, it is not impossible that the intense heat to which these bricks were subjected may have had the effect of driving out the volatile hydrocarbons which form the binder, and it follows necessarily, therefore, that the process of drying the brick would destroy its durability and render it easily disintegrated or pulverized. At any rate, this was a question of fact for the lower court, and it had a right

to take the opinions of Messrs. White, Pederson and Chandler that that was the effect, and the finding upon this issue should control in this court.

### III.

**There never was a test of this machine as provided in the contract. The Construction Company during this test was entitled to suitable, if not ideal, conditions under which to operate the apparatus, and it was the duty of the Gas Company not only to comply strictly with all obligations undertaken by them with respect to the test, but it was also its duty to co-operate in a spirit of fairness and good faith to give the apparatus a fair test.**

It must be borne in mind that this was not a gambling contract whereby the construction company was staking its right to recover the purchase price of the apparatus upon chance; it was not speculating upon the chance that good luck would make it possible for the apparatus to generate gas for a period of twenty days without a break-down or a misfortune. Certainly no one would contend that if through some accident, unavoidable in its character, during the twenty days test, the apparatus had been rendered incapacitated, that the defendant company would lose its large investment in the plant through such ill fortune. And throughout the contract of July 12 it is made apparent that the right of the construction company to receive payment for the plant was not made to depend upon what it actually *produced* during the twenty days, but on the contrary, the parties have scrupulously and repeatedly used the word "capacity" instead of "production." It is stipulated that if the party of the

first part shall in said test bring its apparatus to the capacity of 2,700,000 cubic feet, etc., it shall be entitled to payment. It is true that the capacity is to be determined by the twenty days test, and it is the average capacity per twenty-four hours demonstrated during the test that is to control the rights of the parties. We contend that the capacity proven is a very different thing from the production attained during the twenty days. To be sure, if the apparatus was in constant operation during the entire twenty days under normal conditions, the very best criterion, and indeed the conclusive proof of what its capacity is would be the actual production, but on the other hand, it surely is manifest that if the apparatus had produced an average of two and a half millions of cubic feet of gas operating under normal conditions for sixteen of the twenty days, and was idle the other four because of some unforeseen and unavoidable mishap, it would be absurd to say that the capacity of the apparatus was the aggregate production divided by twenty.

It was necessary, therefore, for the plaintiff to prove, not that the test was started on the 10th of March and ended on the 30th of March, but it was necessary for the plaintiff to prove that there were 20 consecutive operating days of 24 hours each from the time of the commencement to the time of ending the alleged test, and this the plaintiff has not done. The plaintiff only claims that 20 calendar days passed.

Let us present a little more fully this question of whether the contract means calendar or operating days. If it meant calendar days, the contract was nothing more

nor less than a wager; that is to say, if the contract meant calendar days, the defendant bet more than \$26,800 practically against nothing that the machine would operate 20 consecutive days without breaking down, and perform all other conditions of the contract. If calendar days is meant in the contract, then if the machine had started up and run an hour, or a day, and had broken down and been unable to run the next 19 days by reason of the break, the bet would have been won by the plaintiff. This is precisely what the plaintiff claims.

Absolute certainty or perfection are not attained in this world. Courts take judicial notice that machinery will break down in spite of all the ingenious skill of man. Man is the most nearly perfect thing on earth, and yet man is not perfect. If the defendant in this case, being a non-resident, had employed a superintendent, as provided in the contract, to superintend the test of the machine, and that superintendent had become ill, under the construction placed upon the contract by the plaintiff the defendant would have lost its bet.

When these people entered into this contract they necessarily took into consideration what the court judicially knows, to-wit: that machinery is not perfect, and what the court judicially knows are stipulations written into the face of every contract.

Let us refer here to some of the facts proven in this case to demonstrate the contention of the defendant in this particular is correct. It was proven in the case that it was not the custom to operate such machines as herein involved for a longer period than six days without a day's rest; especially is this so in the city of Los Angeles

at the works of the plaintiff. It was shown that a month or two prior to the commencement of this test, what was known as a blast pipe—machinery belonging to and under charge of plaintiff—was destroyed, just about the time the parties were ready to make a test. That defect in the plaintiff's machine was repaired, and then an accident occurred to the machine of the defendant that caused another delay before the test was commenced. Can it be that anyone would contend in a court of justice that if the test had been commenced and the plaintiff's machine had broken down as it did before the test—the part of the plaintiff's machine that was necessary to operate the machine in controversy—that such a test would have been binding upon the parties? In this particular instance the machine did actually break down after it had been in operation four days, and the defendant claims that while the machine was thus disabled, it was not in operation, and the test of the capacity of the machine was not being made. During the three days that the machine was shut down there was not, and there could not be, any measurement of the capacity.

The court will observe that this contract says that there shall be a test of not less than twenty consecutive days of 24 hours each. If the contract between the parties meant calendar days there was no necessity of using the words "twenty-four hours," because calendar days necessarily means that. That is a sidereal day. But since the parties meant operating days, it was necessary to specify the hours governing each period.

Twenty consecutive days must mean twenty consecutive operating days. Any other construction would

make the contract impossible of performance and absurd. If this were a gambling contract, such a construction might have been contemplated, but it was simply the means provided for ascertaining a definite fact, namely, the capacity of the machine, and the contract should be construed accordingly. The authorities sustain the construction contended for by defendant.

Huber Manufacturing Co. v. H. Crawford & Son, 175 Federal, 219;

City of El Paso v. National Bank (Texas) 71 S. W. 799;

Citizens' Electric Light Company v. Gonzales Water Power Company (Texas), 76 S. W. 577;

Francis Bros. v. Heine Safety Co., 112 Federal 899;

Appeal of Hofer, 9th Atlantic 441;

Alta Land &c. Co. v. Hancock, 85 Cal. 219;

Town of Pendleton v. Saunders, 24 Pacific 506;

Fuller v. Shroeder, 31 N. W. 109.

We desire to call the court's attention to the case of the City of El Paso v. National Bank, *supra*. That case involved a sale under a trust deed, which authorized a sale on the publication of the advertisement of sale for ten consecutive days in some daily newspaper published in a certain city. The advertisement was published for more than ten days continuously in the Daily Herald, but two Sundays intervened on which this notice was not published, although there was a publication known as the Sunday Herald made up of a print of matter which appeared during the week published on that day. It was

held that the publication was sufficient, and this ruling was applied, notwithstanding the requirement of strict compliance with the provisions with reference to notice in a trust deed of that character. The court said:

“While the term, ‘consecutive days,’ primarily means that many days directly following one another, it is also defined as meaning ‘successive.’ But in cases of contracts, that significance should be given it that the parties evidently intended it should have. By the expression, ‘for ten consecutive days in some daily newspaper published in El Paso,’ the parties must have intended publication in a daily newspaper in consecutive numbers as such paper was published. If published every day in the week, then it might be contended that the notice should appear in every issue. If, however, the paper was issued on every day except Sundays, it was nevertheless a daily newspaper, as such papers are commonly understood. The courts have held publications in such a paper to be continuous from day to day, although without Sunday issues.” (Citing *Washington v. Bassett*, (R. I.) 2 Am. St. 929; *Kellogg v. Carrico*, 47 Mo. 157);

and the court continues:

“We do not regard the word ‘consecutive’ in this connection as any more forcible than the word ‘continuous.’ Both signify unbroken.”

We also desire to refer to the case of *Town of Pendleton v. Saunders*, *supra*.

That is a case of analogy and importance. The defendant had constructed a water system for the plaintiff, and in connection with it a 500,000 gallon water reservoir, with a provision that it should not lose from evaporation and filtration more than 1½ inches of water, and that a test of 90 days should be made, and which provided that the town should pump water from

a certain source with its pumps once a week for a period of ninety days to their full capacity. This, the court said, “did not impose the duty on the town of doing more than to run its pumps to their full capacity during the time they were usually and reasonably run. It was not required to go to extraordinary or unusual expense for that purpose, or to increase its force of engineers if the one already employed was capable of running the pumps to their full capacity during the hours he was accustomed to run the same. If the supply of water failed for any cause without the city’s fault, so that the reservoir could not be filled at the time required, such failure did not put the city in default. But if the cistern from which the water supply was to be drawn was inadequate, or if on account of the season there was a scarcity of water, the city would not be responsible therefor. The city had as much interest in these tests as the contractor. They were designed for the equal benefit of both parties. The undoubted object was to enable them to know by actual experiment whether the reservoir was completed, by being water-tight.”

The case of *Citizens’ Electric Light Co. v. Gonzales Water Power Company* is particularly in point. That was a contract whereby the power company agreed to furnish for ten days water power by means of a certain water course and water wheel which was guaranteed to be of 100-horse-power capacity, and the water was to be furnished at its full capacity for the full space of twenty-four hours of each and every day during the full period of the term, or so much thereof as may be required by the second party.

Certain parol testimony was introduced of negotiations that took place before the contract was entered into, as to what had been the previous custom in case of high



water or accident when the water wheels did not run, and it was shown that the custom was to deduct that time. It was claimed, however, that there being no stipulation in the contract that plaintiff should be excused from supplying the stipulated power when prevented by floods, plaintiff was liable for such cessation. The court said:

“In the first place, we think appellant is mistaken in the subject matter in this contract. What plaintiff agreed to do was to give appellant the use of the water wheel for power purposes. This appears from the face of the contract. The evidence, as we have already stated it, shows that the wheel contracted for was located and adjusted so that at times of high water there was no such thing as its use. This was well understood by both parties, and in our opinion, by contracting for its use as the wheel stood, the parties had in contemplation its use only as it was possible for it to be used. If we place ourselves in the position of the parties at the time, and take the contract as it reads, and the testimony as we have stated it, we believe the conclusion cannot be avoided that the parties did not contemplate nor intend that the contract should relate to periods when in the nature of the thing contracted for it was incapable of use.”

How, then, can it be said that this machine had a twenty days' test within the meaning of the contract? It not only never was permitted to be operated twenty consecutive days, but during the days it was operated, such adverse conditions prevailed as to render nugatory the purpose of the test. The conclusion of the court, therefore, that there never was such a test as the contract called for is fully sustained.

In MacKenzie Furnace Co. v. Mallers (Ill.) 83 N. E.

451, plaintiff had agreed to furnish an automatic stoker to be used in connection with a boiler which was built upon the premises of the buyer. Defendant was to construct the boiler and it was to have a capacity of 240-horse-power, and in that event the stoker was to develop 30% increase of horse power, and full payment was to be made after the test and acceptance. A test was made, and for the first four hours the guaranty was more than fulfilled, but during the last two hours it fell below, and the average for the six hours was less than the guaranty. The combustion of fuel, however, was imperfect, and it was claimed that the boilers were not in good condition, and an offer was made to permit another test under improved conditions. This offer was refused and a demand made that the stokers be removed. It was claimed that the guaranty having been made with reference to the existing conditions, that the parties must have had in view those conditions, and whether favorable or unfavorable, the failure to make good the guaranty, defeated the right to recover the purchase price, but the court said:

“We cannot give to the contract a construction so unreasonable and contrary to the common understanding as the one contended for. It is true that the rated capacity of a boiler is an estimate only, and that a boiler rated at 240-horse-power may not develop exactly that power; but when the parties referred to a boiler of 240-horse-power, they certainly contemplated a boiler which was expected to develop that much power. The plaintiff was entitled to have the boiler in such condition that when fired without the stoker it would produce the horse-power which a boiler so rated ordinarily produced. To construe the contract as requiring the plaintiff

to develop 320-horse-power with the boiler in such condition that it did not act normal and would not produce anything like the horse-power at which it was rated, would be most harsh and unreasonable. \* \* \* The evidence satisfactorily established that the fault was not in the stoker, and that it would have developed the horse-power required, if the boiler had been in proper condition.”

*Id.* 452.

See also:

Fuller v. Shroeder, (Neb.) 31 N. W. 109;

Tasker v. Crane Co., (Ill.) 55 Fed. 449;

Howard v. American Mfg. Co., 36 N. Y. Sup.  
430;

Mack v. Sloteman, 21 Fed. 109;

Miller v. Patch Mfg. Co., 91 N. Y. Sup. 870;

Gaar Scott & Co. v. Hicks, (Tenn.) 42 S. W.  
455, 457;

El Paso, etc. Co. v. Eichel (Tex.), 130 S. W.  
922, and see especially pages 943 and 944.

We have already pointed out the unfairness and injustice of the conduct of the gas company with respect to the reasonable protests and requests of our operators on account of the fuel, but this was not the only instance where this same spirit of antagonism and unfairness and bad faith was manifested. In the first place, all of the gas experts who testified in the case agreed that before a new machine is put into operation there invariably exists a necessity for experimenting with the apparatus in order to determine in just what manner the steam and air should be applied, the duration of the make, and the blast, and numerous other details in the matter of ad-

justment which vary with the conditions and can only be regulated by the observation of the operator after experiments. This is called "balancing" the machine. It must be remembered that when this new generator was completed, in the latter part of December of 1909, it had never been operated. It was an unusually large generator, if not indeed the largest that had been constructed for the generation of water gas. It was to be divided into two compartments and was in effect two generators with grate areas of not unusual dimensions, but nevertheless it was highly important for the operator to determine just in what manner and in what quantities and under what pressure the air blast should be applied, in order to get the best results. The matter of fuel, as we have before shown, was also a question of grave importance. Naturally our operators were anxious to accommodate the gas company and make the best of the fuel that they had on hand. Most of it contained moisture in excess of ten per cent., and Mr. Millard, as we have shown, on behalf of the gas company, was advocating the advisability of using the brick with excessive moisture in preference to the dry brick. Both Mr. White and Mr. Pederson were inclined to accede to the request, but Mr. Pederson wanted to get credit for the weight of the excess moisture in determining the fuel consumption, which would seem to be a most reasonable request. He explained to Mr. Luckenbach that not only did it lose the weight of the water, but it also required more heat, and therefore consumed more fuel in driving out the excess moisture, and that we should therefore get credit for the weight of the extra moisture,

but Mr. Luckenbach refused to consider that. (pp. 457, 458.)

That was the occasion of Mr. Pederson writing the letter on December 28, revoking their former letter expressing their willingness to use bricks of a greater moisture content. So it was only fair that these operators should have been given an opportunity to experiment with the different grades of brick and ascertain how it acted in the machine before starting the test. One of the important requisites was to determine the proper depth at which to carry the fuel bed, and of course this could only be determined by preliminary experiments. It was also highly important to determine the quantity of oil to be fed into the carburetter during the make period, so as to regulate the proper candle power and the proportion of oil gas to the water gas. Both Mr. Pederson and Mr. White testified that not only in the matter of the reconstruction of the apparatus, but also in the matter of making the necessary adjustments, preliminary experimental runs and in the balancing of the machine, they used the utmost expedition at all times; that they were in progress of completing their adjustment when the explosion that we have already referred to took place in the middle of January, through no fault of theirs, as both Mr. Pederson and Mr. White testified. (Pederson's testimony, pp. 420, 424; White's testimony, pp. 533, 534.)

Shortly afterwards another accident occurred, also due to some unfortunate circumstance beyond the control of anyone, and thus preparations for the final test were seriously delayed. However, along about the mid-

dle of February, Mr. White was in a position to make another experimental run for a few days, and then it was that he decided to double the volume of his air supply and to perforate his chutes, to re-checker his carburetter, and make certain other adjustments that would put the machine in condition for the final test. However, Mr. Luckenbach became impatient, and on February 25, 1910, he wrote Mr. White and informed him that since the explosion and the delay occasioned thereby, he was not satisfied with the way the work had been pushed preparatory to the final test. "We therefore insist that you continue the final test of the apparatus on March 1, 1910, and prosecute the same with reasonable diligence and strictly in accordance with the contract." (P. 212.)

Mr. White testified that it was utterly impossible for him to be ready by the first of March, and he consequently went to Mr. Luckenbach and solicited further time. Mr. Luckenbach agreed to give him ten days additional, only he insisted that he start the test on the 10th of March without fail. Mr. White was bound to agree to these terms, for of course he was at the mercy of the gas company, which had it in its power to cease supplying fuel or operating, and oust him from the premises. Accordingly he did accede to the request. Thereupon Mr. Luckenbach wrote a letter to Mr. White, in which he granted the request for an extension of time to the 10th of March (p. 213) and at the same time he dictated a letter for Mr. White to sign in which it is made to appear that Mr. White requested the postponement and agreed to start on that day, (p. 210). Mr.

Luckenbach in his cross-examination admitted that he dictated both letters. (Pp. 265, 266.)

Mr. Luckenbach also admits that when the 9th of March came Mr. White informed him that he was not ready; that the carburetter was not clean and he wanted time to re-checker; that Mr. Pederson, the operator who was intended to relieve him twelve hours of the twenty-four of each day, had been delayed by washouts and could not arrive for two or three days. But nevertheless Mr. Luckenbach refused to grant the extension. Mr. Luckenbach testified that Mr. White asked for consent to begin on the morning of the 11th instead of the morning of the 10th, but he refused to accede to it. (Pp. 267-269.)

There was nothing for Mr. White to do therefore except to start alone on March 10. He testified that he did not think he would have time to get up his heats by six o'clock on the next morning, but nevertheless when he arrived on the ground at that hour he admits that so far as the fire was concerned, the machine was ready to proceed; but that the carburetter was in no condition to stand the test on the morning of the 10th, was painfully but conclusively demonstrated before the machine had been in operation three days. On the fourth day the make had dropped off about 800,000 cubic feet, and when the apparatus was shut down and the carburetter opened up the next morning, according to Mr. White, it was found to be so badly clogged that it was only a marvel that any gas could get through. (P. 535.) That this condition could not have resulted, if they had been given time to clean the carburetter, even with the im-

proper fuel that was supplied them, is the opinion of both Mr. White and Mr. Pederson (p. 535) (Pederson, p. 497, p. 432, p. 507). Besides that, consider the unreasonableness of compelling this test to start without Mr. Pederson being on the ground. The operation was to continue, of course, night and day, and Mr. Luckenbach knew that the construction company had only one representative on the ground. This meant that during the night of March 10 and the night of March 11 the apparatus was operated by gas company employees without any representative of our company present. Mr. Pederson arrived on the 12th, and on the next day the apparatus was closed down with a clogged carburetter, which of course would never have happened if the gas company officials had been liberal and fair minded enough to have allowed a few days delay in starting the test, so that the carburetter could have been cleaned.

Again, it is the custom in the operation of all water gas sets, to burn out the carburetter periodically. In the operation of the water gas sets at the Los Angeles plant there was an invariable custom of shutting down the sets for one whole day in every seven, and during that time there is either a forced or natural draft allowed to blow through the carburetter for the purpose of burning out the deposits of asphaltum from the oil and carbon from the generator. In this manner the machines are kept clean. ( Pederson, p. 417; Luckenbach, p. 271; Creighton, p. 392; White, p. 536.)

In other plants it is the custom to operate the apparatus only twenty hours and allow the other four hours each day for burning out the carburetter. (Guldlin, p.



606.) But in this contract nothing is said about cleaning out the apparatus, and when Mr. White arrived he naturally assumed that twenty consecutive days of operation meant operation according to what everybody understood to be the practical and indeed only way of efficiently operating such a machine; that is, to lay off the apparatus at proper intervals for cleaning. Accordingly, he took up the matter with Mr. Luckenbach on several different occasions in order to have it understood that the twenty consecutive days meant twenty consecutive operating days, and that they were to be allowed credit for such days as the machine was not in operation for cleaning out purposes. But he never could get any satisfaction from Mr. Luckenbach. Mr. Luckenbach himself admits that he refused to commit himself one way or the other. He testified from a memorandum he had made of the interview as follows:

“He (White) then stated to me that no arrangement had been made for cleaning out time and asked me to consent to an allowance of one day in every seven for time within which to clean out the set. I told him we would not consent to any variation from the form of the contract, and would make no concessions of any time until the test was completed. I stated to him after the twenty days test was completed, he would be at liberty to present such requests for concessions as to time lost as he saw fit, and we would then consider them and act upon them; that until the test was fully completed, we would stand strictly on the wording of our contract as it then existed.” (And see his testimony, pages 269, 270.)

Again, when the machine was shut down on the 14th, Mr. Luckenbach admits that Mr. White asked him again if they would not be allowed cleaning time if they shut

down and re-checked. Mr. Luckenbach had also made a record memorandum of the interview and this is his version of it:

“At nine o'clock on the morning of March 14th, 1910, Mr. White called me up on the 'phone, and stated that when he had asked for a postponement of the time to commence the official test from the morning of the 10th to the morning of the 11th he had intended to clean out the carburetter and replace the checker-work in the carburetter, but that he hadn't done so, and the result was that the set was very dirty and in very bad condition, and that he desired to shut down the set for two or three days in order to do this work. I told him that was a matter for him to decide; that he had started upon his official test; and it was up to him to comply with the requirements of his contract. That if he saw fit not to make any gas on a given day that was his fault and not ours, but that the time lost would certainly be counted in in making up the average of gas made by the set. He stated he understood that but that he thought he would gain by it, and therefore intended to shut down the set. He also stated that he understood we were willing to allow him one day in seven for cleaning out. I immediately contradicted the statement and told him no such agreement had been made, but that I had stated to him in the presence of Mr. C. P. Houghton that his test must be made, and then if he desired to present any reasons why he should be given any credits account of lost time, we would receive and consider them, but that we would not be bound by anything except the strict wording of the contract. I made this memorandum immediately upon hanging up the 'phone. At the time this memorandum was made and at the time the conversation took place, Mr. W. J. Dorr, superintendent of gas distribution, was sitting beside me at my table, and certifies to it.

Q. Mr. White rang you up and asked permission to shut down? A. Yes, sir.

Q. And still told you that he understood he had a perfect right to shut it down, and was not entitled to credit for the time he was not operating?

A. Mr. White was endeavoring to trick me—Mr. White called up and wanted permission to shut down the set. Stating that on the 10th he had intended to clean out the carburetter, and replace the checker-work in the carburetter. He said he understood that, but that he expected to gain by it.

Q. Did he explain why he rang you up if he understood he had a right to shut down and was entitled to no credit? A. He did not.

Q. You don't know why he rang you up? A. I have my belief.

Q. What is your belief? A. I believe he wanted to try and get me to consent to a shut-down.”  
(Pp. 272, 273.)

The value of Mr. Luckenbach's record memoranda is here again demonstrated. For how absurd it would be for Mr. White to ring up for no other purpose than to get the consent of Mr. Luckenbach to shut down when he already understood that he had the right to shut down without anybody's consent, and did not expect to get credit for it. Of course the truth is as Mr. White testified, that he was trying to get Mr. Luckenbach to allow credit for at least one day in seven, according to the custom for cleaning a machine. And he never could get any satisfaction from Mr. Luckenbach on the subject at all. (White, p. 537; Pederson, p. 492.)

Under these circumstances there was nothing for the construction company's operators to do except to endeavor to operate the apparatus continuously during all of the remaining days, notwithstanding it was contrary to good practice in the operation of all such plants. If

these operators had decided to shut down another day between the time gas making was resumed on the 17th and the 30th, it would have meant a fourth idle day, and since they had every reason to believe that the gas company would make no allowance for any idle days, they could only attempt to do the best they could under these most unfavorable circumstances.

But what a travesty it is to say, then, that the production during this test for the entire twenty days determined the average capacity of the machine! It will be noticed that even with a handicap on account of the fuel conditions, more than 2,000,000 cubic feet per day was made for the next eight days, and in view of the recognized practice, even under normal conditions, to shut down every seventh day, it is not strange that about the 25th of March the make began to drop, and that at the end of the test the machine was practically defunct. Does it not stand to reason that if Mr. Luckenbach had been sufficiently fair minded to have allowed a few days for cleaning the carburetor, so that the test might have started with clean apparatus, and had not insisted that they would allow no credit for any idle days during the twenty, or had desisted from the kiln-drying process and supplied the company with the bricks that they easily could have furnished, or with briquettes of a good substantial make, that this apparatus could easily have made largely in excess of 2,000,000 cubic feet of gas per day for twenty consecutive operating days and been well within the fuel allowance.

Again, when the test was completed, and Mr. White learned that Mr. Luckenbach was not satisfied with the

results, he offered to proceed immediately to put the apparatus in condition and make another demonstration, and begged for an opportunity to satisfy him that the machine would make good, but all solicitations of this character were promptly and emphatically repulsed. He had announced to Mr. White that the test was to start on the 20th and end on the 30th, and he refused to make the slightest concession one way or the other, or to deviate from the strict letter of the contract in any particular, notwithstanding one of the provisions of the contract was that

“In making the above agreement, the gas company will be expected to aid our operator in fulfilling the guaranty, insofar as he may require modification of blast, dry steam, etc., this part of the machinery not being installed by us and consequently not under the direct supervision of our operator.”  
(P. 10.)

The “etc.” may well be construed to mean co-operation in all reasonable requirements under the control of the gas company. Yet throughout, Mr. Luckenbach exacted his pound of flesh, and even refused to allow Mr. White to know what his understanding was as to a doubtful feature of the contract. A glance at the correspondence which passed between Mr. Luckenbach and Mr. White shows the unfairness of refusing to allow a second test. (Pp. 215, 217, 221, 223, 281, 284, 292 and 293 of Luckenbach’s testimony.) (Pp. 558 and 561 of White’s testimony.)

We again respectfully submit that there never was a fair test of this apparatus such as was contemplated by the parties or provided for in the contract.

IV.

**Notwithstanding the abnormal conditions presented, substantial compliance with the guaranties was demonstrated.**

We have already called attention to the fact that the amount produced during the twenty days test was not necessarily to be the criterion of capacity. The contract provided merely that an average capacity per twenty-four hours of 2,000,000 cubic feet or more was to be shown, and we think we have proven beyond doubt that the showing made under the existing conditions was a most remarkable one indeed and furnished conclusive proof that under normal conditions the apparatus did have a capacity largely in excess of the minimum and well within the fuel economies prescribed.

But even aside from that consideration, we think it not out of place to call attention to the near approach to performance of the guaranty, even on a basis of the actual results of the test. The total amount of corrected gas made is 34,706,300 cubic feet for the seventeen days on which the machine was in operation. We think we have shown that the fair interpretation of the contract is that twenty consecutive days must mean twenty consecutive operating days, and certainly those days on which the machine is necessarily idle either through mishap or in accordance with the universal custom of operating such a set, should not be taken into consideration in calculating the average production or capacity.

So that if we divide the actual production by the seventeen days of operation, we have an average daily production of over 2,000,000 cubic feet.

As to the fuel, we have the testimony of both Mr. White and Mr. Pederson and also of Mr. Guldlin that the consumption of fuel would have been vastly less, if it had been furnished in a shape and quality reasonably fit for use and would easily have been under thirty-five pounds to the thousand. And it will also be noticed that on each day that the machine was started in building up the fire a largely increased quantity of fuel per thousand feet was necessary to be used, but even under the adverse conditions, and considering the poor quality of the bricks, it would appear that the total carbon used was 1,373,885 pounds, and this divided by the number of thousands of cubic feet of gas made would show a consumption of only a little over thirty-nine pounds to the thousand; but we respectfully submit that out of this total consumption of fuel there should also be deducted the 126,565 pounds of so-called ash that was taken from the ash-chamber in the carburetter and the ash box in the generator, for the reason that the testimony shows that this ash was in fact unconsumed carbon, and there is no reason why it might not have been re-bricked and utilized, although Mr. Creighton denied that the gas company makes any use of it. However, it was not fuel consumed, and if we are given credit for that, it brings the consumption down to close to thirty-five pounds per thousand, and when we consider that the weighing process was only a matter of approximation, and of course was affected more or less by the changes in the weight of the wagons and other conditions, we think a substantial performance of the guaranty in this respect is practically made out, and considering the adverse condi-

tions under which the apparatus was operated, much more than substantial performance is certainly demonstrated.

As to the oil consumption there is no question. It is admitted that less than  $4\frac{1}{2}$  gallons of oil per thousand was used, but as to the candle power it is claimed that there was a breach of the warranty. But the overwhelming preponderance of the evidence in the case is that this provision of the contract was waived. It is an admitted fact that the gas company mixes the water gas produced at its plant and the oil gas in the same holder and aims to carry it for distribution at about nineteen candle power. It would then stand to reason that the practical degree of luminosity at which the gas company would desire to maintain the gas would be about nineteen candles. Both Mr. White and Mr. Pederson testified that the superintendents at the plant would make complaint if they carried the candle power above that figure, and requested that it be maintained at about that average, and both testify that that is the reason that it was not carried higher. Mr. White, Mr. Pederson and Mr. Guldlin explained that the candle power can easily be regulated by putting more oil in the carburetter or by reducing the proportion of carbon monoxide gas and that the candle power could easily have been maintained at from twenty to twenty-two in this apparatus if it had been so desired. (Pederson's testimony, pp. 458, 459, 460, 462; White's testimony, pp. 530, 541; Guldlin's testimony, p. 611.)

And moreover, Mr. White testified that Mr. Luckenbach told him that he would consider that requirement



of the guaranty complied with if the apparatus showed that it could produce 4.44 candles per gallon of oil used, which it is explained is the equivalent of producing twenty candle power gas using  $4\frac{1}{2}$  gallons per thousand cubic feet of gas made, and that the proper way to express candle power efficiency in a machine is in candles per gallon of oil used. (Pederson, p. 462; Wade, p. 341.)

Again, it is demonstrated by the admissions of their own chemist, Mr. Wade, that the photometer known as the Sugg, by which the candle power was measured during this test, necessarily involved an error of a very considerable degree against the water gas. He admitted the authority of a standard scientific work in which it was explained that the Sugg photometer was designed to measure coal gas, and that by reason of the difference in the height of the flame at which the various gases burn, the principal of the instrument is such that it cannot be depended upon for an accurate reading of other gases than coal gas. (Wade's testimony, pp. 329, 331 to 336.)

It is true that Mr. Wade claimed that he calibrated this particular instrument so that the error was not very great, but the fact that this water gas burns with a much shorter flame than the oil gas or the mixed gas, shows that he could not have calibrated it so that it would even approximate an accurate reading for the others without reading the luminosity of the water gas less to a very considerable degree. Mr. Wade admits an error of one-quarter of a candle, and our witnesses think it is considerably more. (Pederson's testimony, p. 463; Guldin, p. 631.)

It is obvious then that even a reading of an average candle power of nineteen so nearly approaches the guaranty that under the circumstances, and especially in view of the most unfavorable conditions under which the test took place, more than a substantial performance of that requirement of the contract was attained.

No complaint whatever is made that the gas produced was not well fixed and non-condesable, nor is there any question of the adequacy of the scrubbers.

V.

**The claim that there were mechanical defects in the apparatus was fully disproven and the finding of the court against the claim is supported by the evidence and conclusive.**

It was alleged in the complaint, and an effort was made to show by the testimony of Mr. Creighton, that certain mechanical defects appeared in the machine at the end of the test, but it was proven by Mr. White and Mr. Pedersen that these defects were mere temporary troubles that easily could have been remedied, and that the construction company offered in good faith to restore the machine to perfect working order, if the company would accept, but they refused the offer. [Finding 11, p. 777, and finding 13, p. 779, testimony of McGillivray, p. 595, and Caldwell, p. 594, White, pp. 558, 560, Pederson, p. 451.]

VI.

**The carburetter, as well as other parts of the apparatus, was of ample capacity to have met the guaranties under normal conditions.**

In a desperate effort to account for the rapid falling off in the make of the machine as the test progressed, on some other hypothesis than the poor quality of the fuel, plaintiff's operators testify that the carburetter was not of sufficient capacity to handle the amount of oil fed into it during the "make" period.

The operators who advanced this opinion on behalf of the gas company were Messrs. Creighton and Young. But the complete lack of foundation for any such assertion is so completely shown by the record that we cannot believe that there was any sincerity in the expression of these opinions, and furnishes another reason why the testimony of the gas company's operators should be disregarded.

Let us first consider Mr. Creighton's testimony on this subject.

In the first place, he made no pretense of being an engineer. He had had no experience in water-gas manufacture except as an employee of the plaintiff in this action. For seven or eight years he was a foreman at the plant, and had occupied the position of assistant superintendent for a few months prior to the trial of this case. [P. 354.] The only water-gas sets that he had ever handled were the sets at the gas company's plant [p. 684], and insofar as designing or constructing such plants were concerned, his experience was confined to remodelling some of the apparatus at this plant.

His school training was limited to the primary grades in the public schools, and he made no pretense whatever of ever having had any education in any science whatever. [P. 708.]

Now, as shown by Mr. Guldlin, one of the difficult problems of gas apparatus designing is the regulation of the proper size and proportion of the carburetter as well as the other units. He shows that this is one of the subjects that has been given the most careful study by expert engineers, and the principles that govern the regulation of those features in gas construction fixtures are jealously guarded as trade secrets, because they have been worked out upon a scientific basis by the most experienced and trained engineers. [P. 626.]

Yet Mr. Creighton, with his lack of experience or training, would have us accept his opinion against the carefully worked out conclusions of trained and experienced gas engineers, that the carburetter in this apparatus was too narrow for its height. He says: "There is something like 25,000 brick in the carburetter and superheater and the ratio there in a small area is trying to make too much volume in a small area in a given length of time." Accordingly, he concludes that the cross-section area of the carburetter is about 50% too narrow. [P. 699.]

Mr. Young was the superintendent of gas manufacture at the plaintiff corporation, and was, if anything, less qualified to express an opinion on this scientific problem than was Mr. Creighton. He had been in the employ of the gas company about two years, and a part of that time he was manager of operations and

then became superintendent of gas manufacture. Besides that, he had had two years' experience in a water-gas plant in the east, but that was the extent of his experience and the sole foundation for his knowledge of water-gas apparatus. [Pp. 730, 738.] He explains that if the carburetter is overloaded with oil it will show in the seal, and he says: "I only noticed the seal once or twice during the test. I saw oil on it once or twice. I did not notice it very often." Upon the strength of that he advanced the opinion that the carburetter was too small in diameter to handle the necessary quantity of oil to make two million cubic feet of gas in this set. [P. 736.]

But now, as against this, we have the testimony of O. N. Guldin, the president of the construction company, who testified that he had been at the head of that organization since 1890; that the company has dealt extensively in the manufacture of gas works apparatus; that he himself had graduated as a mechanical engineer in Norway in 1879; that he took an advanced course in Munich, Bavaria, in mechanical engineering; that he came to the United States in 1880, and was for two and a half years with the Baldwin Locomotive Works in the engineering department, and in 1882 went into gas engineering, and has remained in that branch of the business ever since; that he had from that time to this continuously devoted his time to the designing of such apparatus and the manufacturing of the same. [Pp. 602, 604.]

That besides that, they have an engineering department, and that the plans of this apparatus were drawn

by himself and the head of the engineering department, a Mr. Thwing. [P. 627.] And Mr. Guldlin was the designer and patentee of a number of the features of this apparatus. [P. 605.]

Mr. Guldlin testifies that the capacity of the carburetter depends upon its cubic contents, although the rule for that is rather arbitrary, each company having its own rule. "We have our rules which our engineering department determines." And he expressed the opinion that this carburetter had ample capacity to handle a gas production of from two to three million cubic feet per twenty-four hours, and maintain the gas at more than twenty candle power. [Pp. 610, 611, 625 and 626.] And on page 628 he says: "The diameter of the carburetter is six inches larger than the superheater, but the height and cubic contents of the carburetter and superheater is larger than that of any other builder. Consequently, it gives a larger opportunity for handling the oil at the lowest possible temperature, and that is the feature of the machine—of being able to do so."

He admits, however, that other makers adopt different sizes of carburetters and different proportions, and that that is a matter of engineering opinion, but "my opinion on that subject is now generally adopted. The machines are being built on these lines of increased size of superheater and carburetter. It is adopted here and in England by the engineering firms." [*Id.* 628.]

And both Mr. White and Mr. Pederson express an unqualified opinion that the carburetter of this apparatus was of ample capacity to perform its part in the

production of largely in excess of two million cubic feet per day. [Pederson, pp. 768, 455, 456, 457, 458; and White's testimony, p. 556.]

But aside from the preponderance of the authority in favor of the opinion expressed by our engineers, that the carburetter was of ample capacity, we have a complete demonstration of that fact in the manner in which it operated during the test. It is an established fact that the moment a carburetter is overloaded with oil, that fact is immediately reflected by the deposit of oil in what is called the seal. As Mr. Guldlin stated, it is desirable to attain the largest production of oil gas in the carburetter at the lowest practicable heats. When the heats in the generator are carried to a very high temperature (as they are in oil-gas generators (it seems that the predominant gas produced is what is known as "methane" or marsh gas, which burns with a long flame, but a very low candle power. It is in this process that the excess of carbon is carried over with the gas and appears in the seal as lamp-black. But where the heats in the carburetter of the oil or water-gas generating machine are reduced to a lower temperature, the hydro-carbon gases that predominate belong to a series known as olefiant gases which are of high illuminating power. It is this reaction that is sought to be attained in the carburetter of a water-gas apparatus, and as a result, practically no lamp-black is produced, but the moment more oil is sprayed into the carburetter than it is capable of gasifying, it appears instantly in the seal. By watching the seal the operator is able to regulate the quantity of oil which it is

practicable to feed into the apparatus. Now, both Mr. White and Mr. Pederson were practical operators, and is it conceivable that they would overload the carburetter when that fact would have been perceptible in a moment? Is it possible that two experienced operators would deliberately overload their carburetter in a trial test of this character, when to do so would have the effect of clogging the apparatus and impairing its capacity? The evidence shows that they fed into the carburetter about one hundred gallons each run, and this was maintained as a uniform charge almost throughout the test. [See McDonald's testimony, p. 642.]

If this was an overload, they could easily have put in less, and while less load might have affected the candle-power to an extent, still it is in evidence that it could have been compensated for by spraying a part of the oil into the generator to be there gasified, as was done during the last days of the test, when the carburetor became clogged.

Now, all of the operators admit that the effect of overcrowding the carburetter is manifested in the seal by the appearance of oil; but strange to say, their superintendent, Mr. Young, would have us believe that it would not appear for two or three days, but when his attention was called to the fact that the oil when it is sprayed into the carburetter is immediately vaporized, if not gasified, and this must necessarily circulate through the carburetter and superheater and into the seal in just the same manner as do the gases, and therefore would appear in the seal immediately, his only



answer was that he thought the specific gravity of the vaporized oil was greater than the specific gravity of the gas and would thus move slower. [Pp. 739, 740.]

Such a proposition is absurd on its face, even to a layman, but further along he does admit that if the over-loading was serious it would appear instantly, and that the appearance of the seal is what guides the operator from run to run as to the quantity of oil to use. [P. 741.]

Mr. Creighton and Mr. McDonald both asserted that they did see oil in the seal, but McDonald does contradict the other gas company operators in this, that he admits that the oil would appear in the water of the seal pot after about one-third of the run. Remembering that the run was only six minutes, it is a flat contradiction of Messrs. Creighton and Young's predictions that it would only appear several days after the overloading. [McDonald, p. 641.] McDonald says that: "I should judge that the last ten days the machine ran I observed oil each run in the seal pot. That is, at the end of each run." [P. 642.]

Mr. Creighton testified that he would casually visit the machine once in a while during the test, and naturally he would go to the seal box, for that is the key of the machine, to see how it was balanced. "Sometimes I would see oil there and sometimes I would not and it would be normal." [P. 696.] Practically throughout the test we fed one hundred gallons of oil each run. [McDonald's testimony, p. 642.] And it would stand to reason that if that was an overcharge, and the carburetter had not the capacity to handle that

much, it would show every run instead of only occasionally, but both Mr. White and Mr. Pederson emphatically deny that there was any appearance of oil in the seal to indicate an overcharging of the apparatus. Pederson testified:

“My observations were to the opposite effect. When the carburetter is not taking care of the oil, it usually shows in the seal pot by showing a yellowish color in the water, and I frequently called the attention of the operator to the fact that the seal showed pretty good. At times a little tar substance would come over, and that would indicate that the apparatus was working properly, because the proper operation is to get your seal just running between tar and lamp-black without any oil.” [P. 766.]

Mr. White testified that he looked at the seal very often each day.

“I never noticed the appearance to any great extent. There is always little blotches of oil coming over. The water was used over and over and over again in the gas company’s set, as well as ours. They kept pumping it over, and it naturally was discolored, but no clear oil at any time.”

“Q. Did you ever notice the appearance of any oil in the seal that would indicate to you as a gas operator that the machine was being overcrowded with oil? A. I never did. No, sir.”

And besides that, the record of the apparatus during the test in production of gas would certainly refute any theory that it had not the capacity to handle a production of gas largely in excess of 2,000,000 cubic feet per day. Commencing with the 17th, the apparatus made over 2,000,000 cubic feet per day until the 25th—a period of eight days, and it is established, as we have before shown, that it is almost unheard of to operate

such an apparatus more than six days without shutting down to burn out the carburetter. If then the carburetter did not have ample capacity to handle a production of more than 2,000,000 cubic feet per day, how is it possible that it did so for eight days under such grossly abnormal and disadvantageous conditions? It did clog up, to be sure, before the test ended, but its record for those eight days conclusively shows that it was not because it was not gasifying the oil, but because of the tremendous amount of fine carbon that blew over from the generator.

In the course of their herculean efforts to excuse the character of the fuel as being the primary cause of all the difficulties of the test, and in the endeavor to support their theory that the inability of the carburetter to gasify the oil was the trouble, the gas company's operators have had the audacity to claim that there was very little fine stuff passed over from the generator to the carburetter. [McDonald's testimony, p. 652; Creighton's testimony, p. 700.]

In view of the conclusive proof of the vast quantities of fine lamp-black that was dumped into this machine throughout the test, and in view of the admitted fact that on that account the fire packed and it was necessary to blast the air through the apparatus under great pressure, and in view of the vast quantities of unconsumed fine carbon that were removed from the dust chamber in the carburetter, it follows necessarily that large quantities of such material must have blown over into the carburetter. Besides that, Messrs. White and

Pederson are the men who actually removed the checker-brick in the carburetter while the machine was shut down three days during the test, and they would surely know what the deposit was upon the bricks, and they testify that it was an accumulated mass of this fine carbon dust. It is of course true that in the heavy California petroleum there is a large percentage of asphaltum, and the deposit upon the checker-brick is necessarily heavy as compared with the eastern lighter oils of paraffin base. But even so, the results obtained in this test afford a complete demonstration of the correctness of the statements of our witnesses that the carburetter would never have become clogged, or the production of gas materially decreased as the test proceeded, except for the overwhelming deposit of the fine carbon that blew over from the generator.

Considerable stress was placed by counsel for plaintiff, in the examination of witnesses, upon the obligation undertaken by the construction company in the contract of July 12, to provide ample means for the collection and easy removal of dust and fine carbon carried from the generator to the carburetter, and the intimation was that the failure of the apparatus to accomplish the results expected was due to the construction company's failure to comply with this provision of the contract. But we do not see how plaintiff can consistently rely upon any such claim in view of the testimony of their own witnesses that the means furnished did provide for the collection and easy removal of that material, and their failure to plead any such breach of the contract.

But however that may be, it is in evidence that this carburetter was equipped with a patented device invented by Mr. Guldlin, and which did have the effect of collecting large quantities of the dust and fine carbon which blew over, and it is the consensus of opinion of all the witnesses that under normal conditions ample provision was made against this menace. But counsel have called attention to the fact that this dust collection chamber was already in the carburetter as it was originally constructed, and, therefore, could not be said to be a *change* provided to accomplish this end. [Cross-examination of Mr. Pederson, p. 480.] Certainly, however, it cannot be contended that this requirement to provide against this obstacle confined the construction company to the making of any particular change in any particular apparatus, nor obviously did it contemplate that ample provision should be made for the collection and removal of abnormal quantities of such dust arising through the fault of the gas company to an extent far beyond anything that could have been reasonably anticipated. It was surely sufficient if the construction company took proper precaution and devised reasonable means, whether in the carburetter or elsewhere, to take care of the situation, and Mr. Pederson explains that they did make a change in the connection between the carburetter and the generator which had the effect of providing an additional receptacle for dust and carbon blown over. [Pp. 481-486.]

But, besides that, it is also in evidence that ample means for the prevention of such dust being blown over was particularly in the minds of the designers

when the new generator was constructed. Mr. Guldin has made a full explanation of this feature of the apparatus. He says that the effort to take care of the dust was on the line of attaining the end without specifically attempting to build an attachment to the carburetter. "In other words, in the reconstruction of the generator, we knew that by materially increasing the grate area we would reduce the necessary flow of air through the fuel bed, which would have a direct effect of not carrying any excessive amount of dust over." [P. 621.] He explains the very obvious truth that if instead of having a deep, concentrated fuel bed through which the air must be forced at high velocity in order to inject the necessary amount of oxygen to develop a large production, the area of the grate bars was largely increased, or, as in this case, doubled, the volume of air to be brought in contact with the surface of the carbon could be very largely increased, and yet the velocity of the blast largely diminished. Of course, the slower the air is passed through the fuel bed, the less carrying power it would have, and consequently diminish the amount of dust which the operator would have to contend with in the carburetter.

He expresses the unqualified opinion that under normal conditions, with an ordinary loose and porous fire bed, a much larger capacity could have been obtained and the trouble from dust practically eliminated. [Pp. 620 to 623.]

But, as explained by Mr. White and Mr. Pederson, the packing and smothering of the fire by the constant inrush of this disintegrated and crumbled fuel made it

necessary to force the air through the fuel at a very high velocity in order to get it through at all, and thus it was that such abnormal quantities of the dust was carried over into the carburetter as to finally block operations. [Pederson's testimony, pp. 523, 524; also p. 531; White's testimony, pp. 548 and 552.]

Besides, as we have already shown, provision was made for removing the dust by perforation of the chutes, and there is no doubt that this would have answered the purpose under ordinary conditions.

It is quite clear, therefore, that no fault could be attributed to the construction company in this regard, nor is there the slightest basis for any contention of defect in the apparatus in so far as this requirement of the contract was concerned.

### **Conclusion.**

On the whole, it is respectfully submitted that the evidence presented in the case afforded a complete demonstration, not only that the construction company had nothing like a fair opportunity to show what the apparatus was capable of doing, but also that if in fact any reasonable opportunity had been accorded the defendant, the apparatus would largely have exceeded the minimum capacity mentioned in the guaranty. It is evident that our operators, while endeavoring to their utmost to give the apparatus a fair demonstration under favorable conditions, and to avoid controversy and litigation, were nevertheless working in an atmosphere of hostility and surrounded by spies watching for an opportunity to distort any circumstances to

the disadvantage of the apparatus, or to record any statement that might be warped into an admission of failure, or a justification for the gas company's conduct. (To be convinced of this it is only necessary to read the testimony of their inspector, Carey, which will be found in the record from pages 658 to 679.) We think that in view of the tremendous investment that the construction company had in this machine, and the large additional expense which it went to in the effort to satisfy the gas company, and the obvious good faith of its operators throughout the history of the transaction, entitled the defendant to ideal conditions under which to test the apparatus, but it is shown beyond question that they never insisted upon anything other than an opportunity reasonably favorable. The overwhelming preponderance of the testimony is that they did not get anything like a fair chance, and therefore never had a test under the contract.

We have, of course, under the rules, been compelled to prepare this brief without having had the advantage of knowing definitely upon what theory of the case plaintiff in error will place its reliance, and have therefore endeavored to anticipate all points that may be presented. In doing so it is quite probable that we have prolonged the brief in the discussion of questions that may not arise, but nevertheless we have thought it advisable, even at the risk of protracting the brief to unpardonable lengths, to present our views in a general way, at least, upon all phases of the case, and have thought it would be of assistance to the court to quote quite extensively from the evidence. We have



done so largely with the view of making it plain to the court that the vital questions in the case are questions of fact and depend exclusively upon reaching conclusions from conflicting evidence and with a large preponderance of proof in favor of the findings of the court. It is needless to say that under such circumstances every presumption is in favor of the findings of the trial court, and its findings will be accepted by this court unless manifestly without any support in the record.

“Where a case is tried by the court without a jury, its findings upon questions of fact are conclusive in the appellate court. Only rulings upon matters of law when properly presented in a bill of exceptions can be considered here, in addition to the question, when the findings are special, whether the facts found are sufficient to sustain the judgment.”

Empire State Mining Co. v. Bunker Hill Mining Co., C. C. A., 9th Circuit, Judge Ross delivering the opinion, 114 Federal 417, and cases cited, 418;

McIntosh v. Price, C. C. A., 9th Circuit, Judge Gilbert delivering the opinion, 121 Fed. 216;

San Fernando Copper Co. v. Humphrey, C. C. A., 9th Circuit, Judge Gilbert delivering the opinion, 130 Federal 298, and cases cited, pp. 300 and 301.

Respectfully submitted,

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No. 2159.

United States  
Circuit Court of Appeals

FOR THE NINTH CIRCUIT.

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Los Angeles Gas and Electric  
Company, a corporation,  
*Plaintiff in Error,*

*vs.*

The Western Gas Construction  
Company, a corporation,  
*Defendant in Error.*

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**REPLY BRIEF FOR DEFENDANT IN ERROR.**

Counsel for plaintiff in error at the argument of this case having advanced two propositions which have not been fully met in our opening brief, we asked and were granted leave to file this supplement to our brief.

The points made were (1) that the court having found that the apparatus had not a capacity in excess of two million cubic feet of gas per day, plaintiff should have been given judgment for the \$823.45 mentioned in the second paragraph of the supplemental contract [Record, p. 41], and (2) that the court erred in taking

into consideration the correspondence and the circumstances before the parties at the time the original contract was made, in arriving at the true meaning of the contract.

Upon the first of these propositions it is sufficient to say that this suit was brought to recover the sum of \$26,823.45, together with certain expenses incurred by plaintiff in removing the apparatus from its premises, upon the theory that a test of the apparatus had been had in accordance with the contract of July 12, 1909, and by that test a capacity of less than two million cubic feet per day demonstrated, as a result of which plaintiff was, under the contract, entitled to the return of that sum of money under the provisions of the third paragraph of the contract. [Record, p. 43.] Plaintiff's right to recover is measured, therefore, entirely by the contract, but every line of the contract shows that the right of either party to receive any money under the contract was entirely dependent upon the result of the test; plaintiff's right to recover the \$23.45 was made to depend upon the failure on the part of the construction company to bring the apparatus to a gas making capacity of more than two million cubic feet *in said test*. But the court has found, in the most unequivocal language, that said test never took place, and moreover, that the failure to test the apparatus as provided in the contract was due to the fault of plaintiff. [Finding XII, p. 779; finding XVI, p. 781; also p. 785.]

Neither is the finding of the court that the apparatus did not have a capacity in excess of two million cubic feet of gas per 24 hours inconsistent with the findings

of the court that there never was a test as provided in the contract.

That finding [par. XVI, p. 1785] was made in response to the allegations of our cross-complaint whereby we sought to recover the whole purchase price on the theory that the apparatus had the maximum capacity mentioned in the contract. But the court, as said before, in response to the issues made by the complaint and the answer thereto, has found that owing to the fault of the Gas Company that test was never had, "nor was the same such a test as would properly or fairly indicate or determine the capacity or economy of operation of said apparatus for 20 or more consecutive days or as a permanent operating apparatus or otherwise." [Record, p. 785.]

Having reached this conclusion, and in view of the fact that the contract provides that the capacity was to be determined solely by the 20 day test provided in the contract, it followed that there was no evidence from which the court could judge what capacity, if any, the apparatus had in excess of two million cubic feet, and the court therefore concluded that defendant was not entitled to recover on its cross-complaint, and consequently could not find that the apparatus had a capacity in excess of two million cubic feet per day.

But whatever the finding of the court might have been with respect to the capacity of the machine, it is still true that in the absence of the test called for by the contract plaintiff was entitled to recover nothing. The completion of the 20 day test as prescribed by the contract was a condition precedent to the right of either

party to recover anything upon the contract. Whether the apparatus in fact had a capacity of one million or three million cubic feet per day, was not the measure of the right of either party to recover; it was made to depend upon the capacity shown in the test prescribed by the contract, and in the absence of that test, certainly the Gas Company, to whose fault it was due, can recover nothing.

With respect to the second proposition, we make the following answer:

1. That plaintiff is not now in a position to complain of the admission and consideration by the court of the evidence of the circumstances surrounding the parties at the time the original contract was made, and the correspondence and negotiations which led up to the making of the same, with a view to arriving at what the parties meant by the use of the term "lamp black fuel," for this reason:

That plaintiff not only made no objection to any of the evidence of the circumstances, declarations and negotiations which took place at the time the contract was made, introduced by us for the sole purpose of proving that it was intended that the lamp black should be furnished bricked in a substantial form, but plaintiff's counsel themselves also offered in evidence all of the correspondence relating to the character of the fuel for the same purpose of throwing light upon the meaning of the contract in that regard.

At the outset of the trial Mr. Goudge announced that "the negotiations between the parties and their situation with reference to this contract will be more briefly

and clearly shown by the correspondence that took place between them, and we have a series of letters that tell the whole story, which we will identify and introduce.” [Record, p. 160.]

Thereupon, commencing with a letter written more than a month before the original contract was made, plaintiff’s counsel read in evidence a series of letters, all bearing upon the question of what the parties had in mind when they prescribed the use of “lamp-black fuel” in this generator. And in the course of the reading of the letters Mr. Goudge further announced the purpose for which they were introduced, as follows:

“The object of this testimony is not to show or attempt to show that we performed the contract on our part prior to the execution of this contract. We don’t care whether we did or not, and we don’t think the court is concerned whether we did or not prior to the making of this supplemental contract. And I will omit parts of the letter unless counsel desires the whole letter. I want to confine this letter merely to the point of what the expression ‘lamp-black,’ as used in the original and supplemental contract, means, and also that the parties agree as to what it meant and knew what it meant, and there is a part of this letter from the Western Gas Construction Company which recites and admits that the lamp-black referred to in the contract is a by-product of our manufactured gas.” [Record, p. 184.]

Besides that, counsel for plaintiff examined Mr. Luckenbach concerning negotiations which took place at the time the original contract was made, and in the introduction of our evidence we proved by Mr. Peder-son what information he had concerning the character of the fuel, and all of the circumstances surrounding the parties at the time it was made [p. 400 *et seq.*], and we

proved by Mr. Guldlin the fact that samples were submitted of the quality of the material, and that the guaranties were based upon the information thus obtained [p. 602 *et seq.*], and all of this evidence was admitted without the interposition of any objection on the part of plaintiff's counsel nor any suggestion that it was deemed incompetent as being an attempt to change or add to the contract by parol. But as said before, both parties apparently agreed that the court had the right to consider all this testimony in arriving at the true meaning of the contract. Accordingly, the court has found just what the situation of the parties was, and what information the defendant had at the time these guaranties were made, and that defendant relied upon the facts thus presented in making the guaranties. [Finding II, pp. 770-772.]

It is an inflexible rule of this court, as declared by Judge Ross in an opinion delivered in *Empire State Mining Company v. Bunker Hill Mining Company*, 114 Fed. 417, that:

“Where a case is tried by the court without a jury, its findings upon questions of fact are conclusive in the appellate court. Only rulings upon matters of law, when properly presented in a bill of exceptions, can be considered here in addition to the question, when the findings are special, whether the facts found are sufficient to sustain the judgment.”

Not only is no question of law raised as to the admissibility of the evidence which was offered to explain the meaning of the contract, either through exceptions



taken to any ruling of the court as to the admissibility of the testimony or in any other manner, but as before shown its admissibility was practically agreed to by both parties. We therefore respectfully submit that these questions cannot be raised for the first time on this appeal.

In the second place, even if the question of the admissibility of the testimony was properly before this court, it still is not true that the court would be confined to a consideration of the correspondence and facts existing at the time the contract of July 12, 1909, was made—because it is quite manifest that in the contract of July 12, 1909, the parties contracted to use fuel of precisely the same quality that was referred to in the original contract. Throughout the contract of July 12, 1909, the parties refer back to the original contract for a description of the material to be used in the final test, and consequently we had a right to ascertain what the parties meant when they used the expression “lamp-black” in the original contract by reference to the circumstances surrounding the parties at that time, in order to determine what the same expression meant in the second contract.

With this view also counsel for plaintiff apparently coincided at the trial in the course of a discussion as to a part of the correspondence after the original contract was made, when Mr. Goudge said:

“This (letter) is material because it is from the Western Gas Construction Company, and refers to the manner in which the test shall be applied to this apparatus. When the supplemental contract was made, *no new tests were prescribed*. It still had to have a certain make of

gas for a certain quantity of fuel; and the *same kind of fuel*, the same kind of oil; and what was a test under the first contract would be a test under the second." [Record, p. 189.]

We therefore respectfully submit that it was not only the duty of the court to take into consideration the circumstances surrounding the parties, their correspondence and declarations, at the time the original contract was made, as well as at the time the supplemental contract was made, but the appellant also at the trial of the case acquiesced in that view, and cannot now for the first time question the competency and relevancy of that testimony as an aid to the interpretation of the contract.

Respectfully submitted,

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WARD CHAPMAN,

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